Academic Achievement Gap

The Role of Ethnicity and Parent Involvement in Predicting Reading Achievement

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Dedication

My dissertation is dedicated to the Paige, Marshall, Primm, Ricks and Owens Families.

My sole purpose in earning the Ph.D. degree beyond positively impacting the reduction of the academic achievement gap was to honor the legacy set before me by my great grandmother, grandmother, mother, father, sister, husband, and cousin. Patsy Paige was my great grandmother who founded a one-room schoolhouse and church in rural Mississippi known as Paige Grove School and Paige Grove Missionary Baptist Church, respectively. Professor Ora Paige Marshall was my grandmother who served as the lead teacher and principal of Paige Grove School, a kindergarten through eighth grade school. Grandma Marshall later earned a professorship in education at Jackson State University in Jackson, Mississippi. Fannie Marshall Primm is my mother, and she earned a Ph.D. degree in education from the historic Black institution of Atlanta University. Ralph Primm was my father. He was an accomplished pianist and attended both the University of Minnesota and Juilliard School of Music in New York City, New York. Jonette Primm is my sister, and she has dedicated her life to self directed study of African history. Jeffrey Ricks is my husband, and he is a master teacher with six earned teaching licenses from kindergarten to twelfth grade. Cousin Vernon B. Owens was my second cousin; he provided loving support to my family after the unexpected passing of my father in 1971 until his death in 1986; Cousin Vernon retired from the University of Minnesota Hospital as a maintenance mechanic.

Abstract

The purpose of the present study is to investigate the relative strength of parent involvement versus ethnicity and how they affect the academic achievement gap between racial backgrounds of Caucasian, African-American, Asian, Hispanic, and Native American as measured by the reading portion of the State Site of Research Comprehensive Assessments-Series (SSRCA-II). The sample is drawn from Connecting Parents to Educational Opportunities (CPEO) parents and their children who are in the district which was the site for this research. To be classified as a CPEO parent, he/she had to have completed a seven-week course at one of the research participant's Title I school sites since its 2008 inception year to present. The composition of student racial backgrounds in the present study was 53% Caucasian and 25% African-American students, which made up 78% of the sample. Hispanic, Asian, and Native American students at percentages of 12%, 7%, and 3%, respectively, represented the remaining 22% of the sample.

The inferential statistical results are based on the logistic regression analyses. Parenting and ethnicity variables, which were both independent variables, did not significantly improve any of the models' ability to predict students' reading proficiency. However, social economic status (SES), control variable, remained statistically significant through all of the analyses. Referring to the research question, the major finding from the research showed that SES was a significant predictor of student reading achievement. The findings were not expected but informative in terms of reshaping the discussion on academic achievement. The present study was not an experiment. Therefore, causal claims cannot be made, but implications for practice may be drawn

from the data analyses. Insights gained and ideas to ponder based on the data analyses are the (a) Cradle to Prison Pipeline, (b) equity of opportunities, and (c) business education.

A pathway has been laid to answer the research question and provide new knowledge to school districts and the research community with a focus on equity, achievement and excellence for K-12 students. The focus on parent involvement and ethnicity should be redirected to address the challenges of SES. Parent involvement and ethnicity are factors in the achievement gap issue. However, addressing SES primarily may bring greater reduction in the achievement gap and increased student achievement among public school students.

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Chapter 1: Introduction

The purpose of the present study is to investigate the relative strength of parent involvement versus ethnicity and how they affect the academic achievement gap between racial backgrounds of Caucasian, African-American, Asian, Hispanic, and Native American as measured by the reading portion of the State Site of Research Comprehensive Assessments-Series (SSRCA-II). This dissertation is organized into five chapters. Chapter one is the introduction to the dissertation; it includes background to the research problem or need, research question, purpose, parent involvement model and conceptual framework, organization of the study, and summary.

Background of Research Problem or Need

Sixty years after the 1954 Supreme Court landmark decision of Brown versus the Board of Education in favor of Brown, academic achievement is still unequal between African-American, Asian, Hispanic**,** and Native American and Caucasian students in American schools due in part to inconsistent parent involvement, and resegregation. With the onset of increasing demands of accountability, the contrast between Caucasian and African-American academic achievement is more apparent. Racial desegregation is now unraveling and resulting in resegregation. Increasing demands of accountability are based in part on standards-based curriculum and high-stakes testing requirements contained in the No Child Left Behind (NCLB) Act (U. S. Department of Education, 2003). The present state of affairs is the existence and challenges of the achievement gap between Caucasian and African-American students primarily and also between Asian, Hispanic, Native American and Caucasian students. The achievement gap is defined as academic

differences in achievement for African-American students and other students of color as compared with Caucasian students (Carpenter, Ramirez, & Severn, 2006). Clear guidance is needed to develop more effective school policies and programs that aid in closing the achievement gap (Singh, Bickley, Trivette, Keith, Keith, & Anderson, 1995). The varying degrees of parent involvement in education and gaining an understanding of the relative strength of parent involvement versus ethnicity are worthy of ongoing research.

The achievement gap as it relates to parental involvement stems from the realization that kindergarten through twelfth grade (K-12) public schools are taught predominately in a Western tradition (Tyler, Uqdah, Dillihunt, Beatty-Hazelbaker, Conner, Gadson, Henchy, Hughes, Mulder, Owens, Roan-Belle, Smith, & Stevens, 2008). The family culture starts in the home, transferred from the parents to the children, internalized by the children and then may or may not be demonstrated or exercised in the classroom. According to Tyler et al. (2008), the cultural value of collectivism is embraced by African-Americans, Asians, and Hispanics. The cultural values of individualism and competition are embraced by the majority in the United States; they are considered mainstream values. The Western tradition has affected teaching in the sense that students are taught to work independently and engage in healthy doses of competition between their classmates. Students who are not a part of the majority population are put in a position to assimilate into the school tradition or mainstream culture and, for the most part, ignore any differences in their cultural traditions while attending schools. Although there are events that acknowledge multiculturalism such as Black history month, Hispanic history month, and the Hmong New Year, the emphasis is

a short span of time. The parents fulfill their legal responsibility to send their children to school, but their personal participation may be curtailed.

The ideal definition of a public school goes beyond identifying its funding sources but rather reflects on its goal which is "to renew a public by providing the young with the skills, dispositions, perspectives required to engage with others about their shared interests and common fate" (Feinberg, 2012, p. 1). As educators and citizens, we desire our young people to possess marketable career skills, positive and productive attitudes, and appreciation of differing perspectives and beliefs among our citizenry. To reach adequate levels of attainment in the aforementioned areas, our K-12 students need to perform well academically such that the achievement gap is closed or significantly reduced between Caucasian students and students of color. Currently public school outcomes are not meeting the general public's desires and expectations. In 2008, the graduation rates for Asians were 80%, Caucasians at 78%, while African-Americans and Hispanics were 57% (Koebler, 2011). Expectations and current state of affairs have influenced the emphasis on the achievement gap in our public schools and public discourse. Achievement gaps lead to shortchanging students' opportunities to advance to higher levels of education and to acquire marketable career skills for the workplace. Two adverse outcomes may be occurring. First and fundamentally, without adequate academic skills (reading/math as tested by NCLB rules), students may not be able to attain marketable skills. Secondly, however, if the only approach to closing the achievement gap is drill on basic skills, students may not be able to take the elective courses in high schools that introduce them to employment-related content. Parental involvement may be needed to attain some balance and give guidance on the selection of

career and technical education (CTE) content. Students facing achievement gaps need to be encouraged to enroll in a breadth of CTE coursework in order to acquire practical and/or marketable skills for the workplace. They also need to be prepared to pursue appropriate CTE coursework at the postsecondary level.

The achievement gap is still prevalent and impacts the future of students' lives based on their abilities to perform at grade level in the classroom and at proficiency level on standardized tests which are the order of the day in light of NCLB Act. The research problem presented here addresses the issue of achievement: Is parental involvement related to the academic achievement gap between students of different racial backgrounds? The racial backgrounds to be examined in this study are African-American, Asian, Caucasian, Hispanic, and Native American,. The research problem is relevant and prevalent in academic as well as public discourse concerning K-12 public education.

The focus on the African-American/Caucasian gap is the most striking difference in achievement and employment that presently exist; there are gaps and disparities among other groups of color, but the most extensive gap exists among African-Americans and Caucasians. The *whole idea* of investing in education is to develop and sustain a free, equitable, and economically sound society.

Education is inextricably tied to personal freedom, academic achievement and economic power. One may reflect on the notion of the challenges faced by lower income persons compared to middle or upper income persons. For one to enjoy and receive benefits from the aforementioned qualities of life much work must be done; it is mandatory that a collaborative community effort is the most effective strategy to execute and employ.

This study focuses on the status of the achievement gap in one urban school district that has already created mechanisms for increased parent involvement in the schools. Data have been collected over the past decade to document trends in student achievement. The National Assessment of Education Progress (NAEP) is a national test administered on a biennial basis to a random sample of public school students in 4th, 8th, and 12th grades. The test results represented student academic progress in multiple subject areas including reading (National Center for Education Statistics, 2013). In 2011, State Site of Research (SSR) 4th grade students performed below proficiency in reading on the NAEP test were the following and each respective group's below proficiency percentage: Hispanic (88%), African-American (84%), Native American (86%), Asian (68%), and Caucasian (58%) (Department of Education, 2011).

Dr. David Heistad was the former Executive Director of the Participating School District's Research, Evaluation and Assessment for Participating School District (PSD). According to Heistad (2010), in SSR the achievement gap is among the largest in the United States due in part to Caucasian students ranking in the top 10-15% on the National Assessment for Education Progress (NAEP). A majority of the K-12 students in SSR are Caucasian. Their test scores elevate SSR's ranking nationwide, thus the differences between Caucasian and African-American students are more pronounced than in other states. It is disturbing to note that in 2009 the NAEP reading assessment showed the 2nd largest gap nationwide among SSR's 4th graders. Reading scores showed the average Caucasian SSR 4th graders increased 1 point per year between the years 2002-2009; however, among African-American students there were a decrease of 7 points per year and a decrease of 8 points for the Hispanic students. The gap is an ongoing issue and

challenge. Within the time period of 2003-2009, the eighth grade scores showed improvement. Caucasian students increased 2 points on average; African-American students decreased by one point on average, and Hispanic students increased by 7 points on average. Thus, the African-American-Caucasian gap increased by 1 point; the Hispanic-Caucasian gap decreased by 5. If this rate of change remains consistent, the overall gap would close in 40-50 years, which is problematic for all stakeholders (Heistad, 2010).

The 2012 SSRCA-II results for fourth grade reading proficiency were: (a) 6,431 African-American students scored 52.7% proficiency in SSR, and 912 African-American students scored 38.7% proficiency in PSD; (b) 43,667 Caucasian students scored 82.5% proficient in SSR, and 887 Caucasian students scored 84.6% proficiency in PSD (SSRDE, 2012). The Caucasian - African-American students' gap was 45.9% proficiency which revealed a stark difference in achievement. Overall, African-American students statewide fared better than PSD by 14%; in contrast, the PSD Caucasian students scored approximately two percentage points higher than the statewide results.

The National Average Freshmen Graduation Rate (AFGR) is a measure of the number of freshmen high school students who complete the necessary requirements to earn a regular high school diploma in four years (Chapman, Laird, Ifill, & Kewal Ramani, 2011). "African-American, Hispanic and Native American AFGRs improved 2.0, 2.4, 0.6 percentage points, respectively, since 2008; the 2009 percentage rates are 63.5, 65.9, and 64.8, respectively. Gaps with White rates remained in 2009 (18.5 percentage points for African-Americans, 16.1 for Hispanics and 17.2 for Native Americans)" (Balfanz, Bridgeland, Bruce, & Fox, 2012, p. 34). In the United States, high

school dropouts exceed one million students annually. The tragedy is the individual and cumulative loss of human potential wasted, lost earnings which result in the nation losing hundreds of billions of dollars in revenues (Balfanz et al., 2012). There are human and financial consequences to the dropout issue. As we live in a knowledge-based economy, students in the gap and/or who are dropouts are less likely to find or have self-fulfilling careers. Human capital is central to a growing economy which has far-reaching implications for sustaining such an economy. Humans need to have the ability to develop their individual knowledge base, grasp new technologies, utilize critical thinking and possess reading skills. The collective of the aforementioned human capital qualities allow for career development and advancement. The existence of the gap challenges the continued viability of our economy and human capital. The gap has implications for completion of postsecondary education in terms of earned certificates and degrees. High school graduates have more educational opportunities. An educated workforce allows for the United States to remain competitive in a knowledge-based economy. The detriments to society when students drop out of high school are costly in terms of higher crime rates, increased amount of social services needed and higher underemployment and unemployment rates (Broton, 2009). "By 2018, 70% of the jobs in SSR will require postsecondary education" (Carnevale, Smith, & Strohl, 2010, p. 1). In less than 10 years, SSR residents desiring to be gainfully employed must be ready for a paradigm shift in employment opportunities. According to the 2010 census, the fastest growing populations are people of color, specifically Asians and Hispanics (U. S. Census, 2011). A strong clarion call for closing the academic achievement and employment gaps are being heard across many different communities and entities. In the United States, all

demographic groups felt the painful reality of high unemployment during the most recent recession. African-Americans and Latinos endured an even greater share than Caucasians. During 2007, Caucasian unemployment averaged 4.1% compared to 8.3% for African-Americans. During 2011, Caucasian unemployment averaged 7.9 % compared to 15.8% for African-Americans (Austin, 2012a).

The researcher believes that parent involvement is critical to student achievement. Parents are their children's first teacher; parents have a long-term relationship with their children and have a vested interest in them. Since students are in school for approximately six to seven hours daily over a nine-month period, parents spent the most time and are responsible for their children's well being which includes cognitive, behavioral and emotional development. Parents are in a position to assess their children's academic capabilities based on personal interactions and professional feedback of the teachers and administrators from the schools. Many times parents can provide information to the schools on their children's strengths, weaknesses and talents. They have a holistic perspective of their children and should be called upon when needed to share information with the school personnel. Therefore, parents are important to academic success of their children. Other potential interventions to address the achievement gap are fully funding early childhood education, fully integrated multicultural approaches to teaching in the schools and equitable distributions of funding and resources.

Research Question

This study is seeking to find answers to the following research question: What is the relative strength of parent involvement versus ethnicity in predicting student reading

achievement? Parent involvement and ethnicity are both independent variables. Parental involvement is measured on a continuum from virtually non-existent to highly involve across racial backgrounds. The racial backgrounds being examined are African-American, Asian, Caucasian, Hispanic, and Native American. It is of interest to me to learn about the relative strength of parental involvement and the extent to which different dimensions of involvement are related to achievement versus ethnicity and achievement. I believe that knowing about these relationships can assist urban school districts in the development of effective school programs and policies that support possible solutions to closing the academic achievement gap

The notion of comprehensive parent involvement means that the parent is involved culturally, emotionally, and academically with their child's educational life. We have high, medium, and low achievers in the United States. The *whole idea* of respecting the various cultures that actually make our country rich in character is viewed as a deficit in some educational sectors. Culture is an asset; we need to make the connection between culture and achievement and use the combination to help solve the issue of the achievement gap.

My justification for focusing on reading as the type of achievement to be examined is a result of the key role of literacy in school and career success. "No student with low literacy skills can graduate from high school prepared for college or a career" (Wise, 2009, p. 369). The Alliance for Excellent Education was founded in 2002; its purpose of providing support for effective federal policy regarding middle and high school students is to increase student achievement and attainment levels (Wise, 2009). Their findings revealed that approximately six million students read below grade level at

the middle and high school levels (Wise, 2009). This is problematic in terms of long-term college and career outcomes.

"Literacy is, in reality, the cornerstone of student achievement for any student in any grade" (Wise, 2009, p. 373). In many inner-city elementary schools, students are unable to read and comprehend grade level materials when they enter upper-level elementary grades. It was estimated that upwards to 70% to 80% were functioning below grade level (Honig, 1997).

The NAEP issued a 2009 report card on the achievement gaps between African-American and Caucasian students in fourth and eighth grades enrolled in K-12 public schools based on 2007 test scores (Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009). The achievement gaps exist, but the NAEP assessment results are higher in 2007 than any previous years dating back to 1990.

Vanneman et al. (2009) found the following NAEP key findings:

1. At the state level, gaps in grade 4 reading existed in 2007 in the 44 states for which results were available. Gaps narrowed from 1992 to 2007 in Delaware, Florida, and New Jersey, due to larger increases in African-American students' scores.
2. At grade 8, reading gaps existed in 2007 in 41 of the 42 states for which results were available. (p. iv)

The 2007 and 2009 NAEP results document that the achievement gap in reading is still prevalent, and much work is needed in order to close the gaps. The research question asks whether parental involvement may be related to reading scores on the SSRCA-II, a standardized test that is used to assess whether the schools and districts in

SSR are meeting the established proficiency benchmark requirements in the NCLB Act.

Purpose

The purpose of the present study is to investigate the relative strength of parent involvement versus ethnicity and how it affects the academic achievement gap between racial backgrounds of African-American, Asian, Caucasian, Hispanic, and Native American, as measured by the reading portion of the SSRCA-II assessment. By investigating the relationships between parent involvement, ethnicity and student achievement, the results may lead to school policies and programs which empower urban parents, teachers and stakeholders in general to maximize the efficacy of parent involvement (Jeynes, 2007).

The Parent Involvement Model and Conceptual Framework

To support the research study, the parent involvement model developed at Vanderbilt University in Nashville, Tennessee, will be used as the conceptual framework. The most recent Hoover-Dempsey and Sandler (2005) conceptual model of the parental involvement process has its foundation in the earlier conceptual models of Hoover-Dempsey and Sandler (1995, 1997). Hoover-Dempsey and Sandler (2005) have a five-leveled model that addresses three questions:

1. Why do parents become involved in children's education?
2. What do they do when they're involved (i.e., what mechanisms of influence do they engage when they are involved)?
3. How does their involvement, once engaged, influence student outcomes? (p. 8)

The first level is a parental involvement decision to become involved in his/her child's educational life. The major areas are: (a) personal motivators related to parental role construction for involvement, and parental efficacy for helping the student succeed; (b) parents' perception of contextual invitations to involvement related to general invitation from the school, specific invitations from the teacher and from the student; and (c) school responsiveness to family life context variables related to parental knowledge and skills, and parental time and energy. The combination of the three aforementioned areas lead to an elevated first level of parent involvement forms which reflect the choices parents have to involve themselves at home and/or school. The second level is the learning mechanisms engaged by parents during involvement activities: (a) encouragement, (b) modeling, (c) reinforcement, and (d) instruction. The third level is the same as the second except it is the student's perception of the learning mechanisms engaged by parents. The fourth level is student proximal attributes conducive to achievement. The major areas are (a) academic self-efficacy, (b) intrinsic motivation to learn, (c) self-regulatory strategy knowledge and use, and (d) social self-efficacy for relating to teachers. The fifth level is student achievement based on varied summary measures including standardized assessments.

The conceptual framework relates to the research question in the sense that it identifies the variables that are critical to examining parent involvement. After variables are identified, the research begins on the relationships between the variables and the achievement of different racial backgrounds as measured by the SSRCA-II in reading. As a result of examining the strength of the relationships for different student groups, urban school districts may have a basis for developing effective school programs and policies

that lead to some possible solutions to closing the academic achievement gap. The relationships are potent; the conceptual framework is durable and appropriate for the current study.

Organization of the Study

This dissertation is organized into five chapters. Chapter one is the introduction to the dissertation; it includes background to the research problem or need, research question, purpose, parent involvement model and conceptual framework. Chapter two is the review of literature on the academic achievement gap and its relationships to racial groups and parent involvement. Chapter three provides the methodology and methods of data collection and data analysis used in the dissertation. Chapter four has the results of the data analysis. Chapter five is devoted to the discussion of the results for the research question with references to the review of literature. Secondly, the discussion of the implications, limitations, and recommendations with respect to future research studies are provided. Finally, a conclusion is presented to encapsulate the importance of the present study.

Summary

The introduction to the dissertation provides a historical account of the achievement gap from 1954 with the Brown versus the Board of Education decision in its opening and leads us to the research question which examines the relative strength of relationships between parent involvement versus ethnicity and achievement as measured by the reading achievement of students of different racial groups. A pathway has been laid to answer the research question and provide new knowledge to school districts and the research community with a focus on equity, achievement and excellence for K-12

students. Hopefully it will raise new questions with regards to the achievement gap and empower parents and other stakeholders.

Chapter 2: Review of Literature

The research literature suggests that parent involvement aids in academic success for all racial groups; obviously there are varying degrees of involvement and success (Jeynes, 2003; Mau, 1997; Sanders, 1998). African-American, Asian, Caucasian, Hispanic, and Native American parents contribute positively to the academic success of their children. However, the research clarified this statement because it was based on studies focused on one ethnic group, and the range of parent involvement was from one to three components (Jeynes, 2003). The one to three components were unspecified; therefore, they were not the same for each study. In this present study, I hope to be able to define the components based upon parent involvement that provide information to develop new school policies and programs. Jeynes (2003) advocated for future research, which investigates how specific types of involvement benefit particular racial groups. I feel supported or justified in pursuing the research study and addressing the research question on the relative strength of parent involvement versus ethnicity in predicting student achievement and how they affect the achievement gap because of the lack of literature that exists on the relative strength of parent involvement between different racial backgrounds.

I have a keen interest in the research question because of my professional work experience as a business education and social studies teacher. For 18 years, I have taught in an urban middle school. I have experienced firsthand students at-risk of failing, performing below grade level or not performing at proficiency level on standardized tests. These students are not faring well in a public school system. Parental involvement is on a continuum from virtually non-existent to highly involve across racial

backgrounds. It is of interest to me to learn about parental involvement, and how it enhances achievement or hinders it. The research literature espouses that there is no magic bullet to solving the achievement issue due to its complexity. I believe that the study can assist urban school districts in the development of effective school programs and policies that lead to some possible solutions. The research problem goes beneath the surface of addressing the challenges faced by urban districts in identifying the appropriate ways to encourage effective parent involvement that results in higher levels of student achievement.

In the review of literature, I have chosen six important areas that have impacted parental involvement both positively and/or negatively or, at least, brought a national discussion to the surface. These areas of concentration have implications for continued persistence or reduction of the achievement gap. They are: (a) family structure, (b) school structure, (c) parenting styles, (d) desegregation and resegregation, (e) wealth, income, and social class, and (f) standardized testing. Discussion of the perspectives on the conceptual model follows the six areas of concentration. Finally, a conclusion is presented to summarize Chapter 2.

Family Structure

In Jeynes' (2001) presentation, he stated, "Research supports the notion that family structure is the most important facet of parental involvement" (p. 215). (as cited in Jeynes, 2003, p. 215). Family structure can range from single-parent, two parents, to a multigenerational configuration. Mothers usually head single-parent homes; many times the fathers are absent from raising their own children. Single mothers of preschool children are five times more likely to encounter financial poverty than intact families

(Duncan & Magnuson, 2005). From the standpoint of social development, these children may experience fewer male role models and mentoring relationships (Duncan & Magnuson, 2005).

Jeynes (1998, 2003, 2007) suggested that African-Americans and Latinos were more likely to come from single-parent families as oppose to Asians. The impact or absence of African-American and Latino parent school involvement on their children is greater than for Asians because the average child from the former groups does not have the same level of involvement generally.

In Milne, Myers, Rosenthal, and Ginsburg's (1986) study, the findings were generalized across races, family structures, and age groups and identified that the educational achievement of students was significantly impacted by the number of parents that resided in a home and the mother's occupational status. Two-parent households were beneficial to the achievement of elementary students and specifically African-American elementary students. Family income was an important variable; when the family was classified as low income, generally low income was synonymous with single-parent household, and was a structural barrier to student academic achievement.

According to Jeynes (2003), parent involvement is one of the most pressing topics in education today. As a result of the declining stability of the American family over the last four decades, researchers have been progressively more interested in the levels of parent involvement in the lives of their children.

In 2012, a shift among American women under 30 years old has occurred; there is a surge in this specific age category of women giving birth to babies outside of marriage at a rate which exceeds 50 percent of American women under 30 years old. This

represents approximately two-thirds of children born today to women under 30 years old. Among college educated women, it remains customary that American women are married prior to starting a family (DeParle & Tavernise, 2012). According to DeParle and Tavernise (2012), family structure is turning into a new class divide; the rewards of economic and social benefits are more often allocated to the married couples in comparison to unwedded mothers and/or unmarried couples. Cohabitation is another form of family structure which is viewed as commonplace. Researchers have reported that children born in unwedded circumstances tend to face more risks of experiencing poverty, low academic achievement and emotional and/or behavioral challenges (DeParle & Tavernise, 2012). The risks may impact K-12 children adversely; to overcome these aforementioned challenges requires resilience on the part of the parent; the risk factors are present, but how the parent responds to the factors is important.

According to Wildsmith, Steward-Streng, and Manlove (2011), nonmarital childbearing rose to the level of 62 percent among women ages 20-24 in 2009 as compared to 9 percent in 1970. This represented a steep climb. Wildsmith et al. (2011) found that healthy relationships were the most important component to establishing and maintaining well-being for the children and the parents; this finding remained consistent whether or not the parents were in cohabiting relationships. The nonmarital birth trends have been established and continue due in part to the removal of the stigma associated with nonmartial births in today's society. The highest proportion of nonmarital births is among African-American women; however, the largest increases are among Caucasian and Hispanic women. The disadvantages of nonmarital births as compared to marital births are the economic and social stabilization factors; many times nonmarital births

occur among young couples with less educational attainment, financial resources and access to prenatal healthcare. These factors provide stress to the relationships which may be internalized or negatively impacted by the children. These are psychological barriers which may prove difficult to overcome and present challenges in the classroom.

In addition to disparities in education between Caucasians and students of color, disparities are also found between low-income and higher-income families. In SSR during 2010, 52% percent of children in low-income families live with a single parent as compared to 14% in higher-income families (National Center for Children in Poverty, 2010). The disparities help to conceptualize a frame of reference; it may be distorted in the sense that resiliency factors are not acknowledged; many people facing difficult circumstances and obstacles are able to instill in their children resiliency to cope and then navigate through the trials and tribulations of life. Disparities bring to bear pressure on family structure as the involved adults must create and execute different coping schemas. The aforementioned statistics reveal stark differences in which family structure is more likely to be headed by a single parent if the family is low-income. In general as a society, we tend to focus more intently on negativity and do not accentuate the positives. Life does not have to be totally burdensome, but as a society we rely on disturbing messages and outcomes to dictate our pathways; many times we become misdirected.

The Urban Leadership Institute of Baltimore, Maryland launched a campaign called Raising Him Alone; it referred to the challenges of African-American mothers raising sons alone without the consistent support of the sons' fathers.

The Raising Him Alone (2009) campaign posited the following:

> Seventy percent of African-American children are raised by a single mother. A large percentage of these children are male. Often these male children do not have a lot of contact with their fathers. We believe that it is vital for mothers to learn more about male parenting and male development. (p. 1)

As a single parent, it is important to be involved continuously in their children's education. When parents remained active and focused at home, their children tended to do better in school, and when the parents remained active in the schools, their children tended to go farther in school, thus reducing the likelihood of dropping out of school (Raising Him Alone, 2009). As mentioned earlier, resilience is important to overcoming challenges and abounds among African-Americans experiencing life's difficult circumstances. Resilience is manifested through kinships and social networks that lend support to African-American single mothers. Kinship is not limited to the nuclear family; it includes aunts, uncles, cousins, grandparents, and surrogate family members. Kin people have provided support in childcare, child rearing practices (Stack, 1974). Single parents in general and single mothers specifically do not have to operate in isolation; the supportive resources assist parents by reducing the amount of financial outflow and by building and utilizing social capital. As parents benefit socially and economically, children also benefit through healthy child development; these strategies help to explain how marginalized people as well as students thrive in adverse circumstances and remain a family unit (Taylor, Chatters, Tucker, & Lewis, 1990). The research espoused the necessity for single parents to seek out support and resources to compensate for gaps in parenting.

School Structure

Jeynes (2003) supported the continuing need to seek guidance from parents as to the most beneficial ways of improving student achievement. The effects of parental involvement are most effective at the elementary level (Singh, Bickley, Trivette, Keith, Keith, & Anderson, 1995). In elementary schools, students stay in one classroom with the same teacher except for a few elective classes. There is a significant difference in the operation and structure of elementary versus secondary settings. As students enter their adolescent years, they focus more on peer relationships than family. Some middle and high school parents are not as involved in their children's school lives. Some parents remain actively involved, but generally school functions at middle and high schools do not have the same levels of parent participation as found at the elementary schools. In middle and high schools, students have many more teachers, and parents may connect with all, a few or none of their children's teachers.

In the 1970s, the achievement gap narrowed; it was attributed to positive legislative results stemming from the "Great Society programs, such as Title I, desegregation, and other improvements in basic schooling of African-American students" (Slavin & Madden, 2006, p. 389). Title I was a legislative piece of the Elementary and Secondary Education Act of 1965. Its purpose was to improve academic achievement among disadvantaged students from elementary through secondary grade levels. Title I provided funding to schools and school districts with high percentages of low-income students (U. S. Department of Education, 2009). The Great Society programs were produced during the presidency of Lyndon Johnson in the 1960s. Many of these programs experienced reductions and reversals during the Ronald Reagan presidency in the 1980s.

In recent years the Elementary and Secondary Education Act has included the testing requirements included in the 2002 Federal No Child Left Behind Act (NCLB). The NCLB Act was the reauthorization of 1965 ESEA which provides tools and supports as parents make educational decisions for their children. In February 2012, the United States Department of Education approved a waiver freeing SSR schools from the most punitive actions of the NCLB Act, mainly schools will not be mislabeled "failing" and incur unfair and burdensome sanctions for not meeting annual yearly progress. SSR was one of ten states to receive the Elementary and Secondary Education Act (ESEA) flexibility, an executive action issued by President Barack Obama (Hefling & Feller, 2012; Johnson, 2012a, McGuire, K., 2012).

According to Education Secretary Arne Duncan, State Site of Research Department of Education(SSRDE) met three critically important stipulations: the implementation of standards related to college and career readiness; documented plans and efforts to turnaround the least performing schools in the state; the most transparent of the three new requirements was the implementation of an accountability system which rates school performances statewide and provides designations to Title I schools in four areas: proficiency (yearly progress), growth (based on SSRCA-II results), achievement gap reduction, and graduation rate for high schools (Hallman, 2012). The school designations are calculated on a 100-point scale and fall in the following three categories: *Reward* school (highest 15% performers), *Focus* school (based on proficiency and achievement gap reduction, lowest 10% performers which do not include *Priority* schools) and *Priority* school (lowest 5% performers) (Education SSR Research, 2012). The waiver empowered the SSRDE to implement an accountability system with more

flexibility in developing appropriate measures, higher level academic standards and new measures to improve teacher effectiveness. The tradeoff was eliminating the 2014 requirement of 100% proficiency in reading and math for all students for a six-year plan to reduce the achievement gap by 50 percent (McGuire, K., 2012). A major concession was made by the federal government through the flexibility waiver in an effort to pursue educational excellence with a realistic chance of achievement. The final stipulation was instituting reforms at the state level, which included improvements to student preparation and evaluation as well as a Multiple Measure Rating (MMR) system (McGuire, K. & Brandt, 2012).

In May 2012, Participating School District (PSD) received Multiple Measure Ratings for each individual school and notified parents by letter and the public on its website. The designations were expanded to five categories: *Reward* (highest 15% of schools), *Celebration* (next highest 25% of schools), *Continuous Improvement* (25% not labeled *Focus* or *Priority*), *Focus* (10% making greatest contribution to the gap), and *Priority* (bottom 5%). Nine schools are not identified in the above categories because they are not Title I schools; they are located on the south side of City Site of Research. Three alternative schools were not identified due to low enrollments (Education SSR Research, 2012; PSD, 2012a).

Currently, Title I funding has a stipulation that 1% of the allocation be designated for parent involvement activities (Rodriguez-Brown, 2009). The Connecting Parents to Educational Opportunities (CPEO) program operates in PSD; it is funded through Title I. CPEO provides a seven-week parent educational training program in the areas of academic standards, standardized testing, discipline, home-school partnerships, and other

areas of concern that address how parents can assist their children in achieving academic success. The funding includes providing childcare, transportation, and cooked meals for parents and children who participate. Parents are empowered to advocate for their children's education. CPEO helps parents to develop effective communications with the teacher and school to assist in their child's academic development. The following three parent involvement literacy programs have a long-standing history of improving student achievement among African-Americans and Latinos. The Center for Research on the Education of Students Placed at Risk (CRESPAR) is located at historically top-rated predominantly African-American Howard University in Washington, DC, and prestigiously well-known John Hopkins University in Baltimore, Maryland. These universities have collaborated and conducted research on potential solutions to the achievement gap for students at-risk of failing. One research-based CRESPAR program was Success for All (SFA); it focused on reading and a school reform model at the elementary level. SFA also provided literary intervention programs for middle and high school students (CRESPAR, 2009; Slavin & Madden, 2006). The SFA program 'is having a widespread and disproportionate impact on African-American students" (Slavin & Madden, 2006, p. 390). It has been implemented into approximately 1,600 United States schools in 48 states; the schools using SFA have majority African-American populations in high-poverty areas and are receiving Title I funding. CRESPAR advocates for parent, family, and community involvement; their involvement is considered as assets to the learning process and its success. CRESPAR supports the promotion of these assets to be actively involved. The school policies, programs and practices must be initiated and sustained by stakeholders (CRESPAR, 2009).

In an effort to increase parent involvement among Latino families, the second program, Project FLAME, was developed in 1989 (Rodriguez-Brown, 2009). It is a family literacy-training program based in public schools primarily in Chicago, Illinois, supported by the University of Illinois at Chicago, and funded by the U. S. Department of Education. Project FLAME has a two-pronged focus: increase learning at home and increase continuity between home and school. It is a collaborative effort between the school, home, and teachers. One of its foundational principles is that the parents are the first teachers to their children. Cultural differences in learning between home and school are acknowledged and respected; this is one important aspect of the program to keep communication flowing effectively between home and school

Dr. Janice Hale is a professor of early childhood education and founding director of the Institute for the Study of the African-American Child (ISAAC) at Wayne State University in Detroit, Michigan, the third program. Hale (2001) designed and offered a model of culturally appropriate pedagogy for African-American children and placed the school at the heart of the model. It is three-pronged: classroom instruction, instructional accountability infrastructure and cultural enrichment. Parent involvement permeated the model's three areas. "The guiding principles of the model are as follows: 1. Future success requires that children be connected to academic achievement. 2. It takes a whole village to raise a child. 3. Children learn what they are taught. 4. School is interesting. 5. Learning is fun" (Hale, 2001, p. 112).

The first principle, classroom instruction, is important to make the connection between future success and academic achievement. The connection may be represented in the following sequence of events: African-American children are to progress through

school successfully and move forward to make a career declaration, prepare, master, and complete the necessary postsecondary requirements to realize self-actualization in terms of self-fulfillment and satisfaction of their career choices. The personal self-fulfillment and satisfaction are results of making the connection that academic success can breed career and life success. Hale's model is pragmatic and challenging but realistic and beneficial to African-American learners.

Career identification and development should begin early in children's educational journey; skills and interests are to be nurtured as well as developed. It is important for our teachers, parents, and educational stakeholders to capture the Olympian mindset to train and prepare our students in elementary and middle school and then refine their interests and talents in high school. Students would leave high school with career goals and strategies to realize career options which may include completion of postsecondary programs or degrees for career advancement. It is projected that six out of ten jobs in the future will require educational attainment beyond the high school diploma (Biden, 2012). "By 2020, two out of three jobs will require some postsecondary education or training" (Carnevale, Jayasundera, & Hanson, 2012, p. 2). Middle-education jobs are defined as jobs which pay a $35,000 minimum annual salary and requires that the employees have earned a high school diploma and completed some postsecondary training and/or college, but they have not earned a Bachelor's degree. In the United States, 29 million jobs are classified as middle-education jobs. These jobs are projected to be in demand for at least the next decade. Based on the Carnevale et al. (2012) estimates of the 2011 American Community Survey (as cited in Carnevale et al., 2012), middle jobs are found in the following career fields: (a) 32% blue-collar, (b) 25% managerial and

professional office, (c) 22% sales and office support, (d) 9% healthcare professional and technical, (e) 6% STEM, (f) 5% food and personal services, and (g) 1% community services and arts.

It takes a village to raise a child is a traditional African proverb which revealed the importance of involvement from parents and stakeholders. Collective efforts provide the support African-American children need to achieve academically. Building a social network aligns well with a village of supporters harnessing the values placed on sharing time, talents, and treasures with each other. These values serve to stabilize the foundation of the village.

According to Boykin (as cited in Hale, 2001, p. 116), "verve is a propensity for relatively high levels of stimulation and for action that is energetic and lively." African-American children possessed a high degree of verve when they were products of home environments which were very stimulating. African-American culture is dynamic; children bring their culture to the classroom; they expect school to reflect their highly intense home environments. It is important for African-American students especially males to move during the school day. Too much seat time produces poor academic results (Hale, 2001). The curriculum needs to have multimedia and multimodal teaching strategies to maintain student engagement; it needs to include and promote cultural salience in the teaching and materials. Hale posited that many African-American children live in more crowded spaces because more people usually reside in a single household or dwelling. African-American students are more communal and are more socially connected to people in general. Small learning groups work well because they are

accustom to social interactions; they are more likely to be affective learners, seeking personal interactions with their peers and teachers as oppose to objects.

Oral tradition expresses literacy. Literacy may be expressed in varied ways; in the African-American community the oral tradition dominates as compared to the majority community in which literacy is defined as reading and writing. Hale espoused the need to include multiple ways of literacy expression and progress to the level at which all students are fluent and competent with reading and writing because it is a mainstream expectation for standardized testing and a part of the mainstream school and future employment culture. Hale and Boykin have elaborated on these attributes which may be interpreted as a contrast to the majority culture which includes more individualism and competitiveness as oppose to communalism. They posited the necessity to include pedagogy that would honor both African-American and mainstream cultures; they acknowledged that African-American students need to perform well academically within the prevailing school structure in order to achieve economically viable futures. Therein lays an important piece of closing the gap, connections made between the classroom and a promising and fulfilling future for all students.

As a business education teacher, the self-actualization component of the model ranks the highest priority; students generally do not make long term plans; they live in an instant seeking gratification world. Self-actualization goes beyond well-being and balance; one would have self-fulfillment and satisfaction in the areas of career choices, leisure activities, analysis and application of information, skill, interest, and talent development (Hale, 2001).

Movement, oral tradition, social connectedness, and creative arts through thematic units in the core curricular subjects engage African-American students. Creative arts are commonplace in African-American culture and would be beneficial to use when developing curriculum which stimulates, motivates and engages African-American students to learn. African-American learners are more kinesthetic oriented; creative arts provide a framework to develop curriculum more inclusive of African-American learners (Hale-Benson, 1986).

The model's second component is instructional accountability infrastructure. According to Hale (2001) it is critical that the instructional leader principal in the building provide instructional support to his/her teachers in lieu of direct parent involvement within the classroom. Part of the instructional support includes evaluation from the leader as well as from teaching peers in an effort to create and maintain a culture of teaching excellence. There needs to be reward systems in place that are not necessarily monetary. The leader may recruit parents or other stakeholders to assist and/or tutor in the classroom to reduce the teacher/student ratio. The volunteers may assist in smaller more focused reading groups. The leader may provide ongoing professional development training and parent training workshops at convenient times for parents to attend. All of the above actions promote enhanced learning opportunities for achievement gap students. Many times, African-American parents are saddled with responsibilities that may prohibit their participation in the school or classroom due to demanding family/work schedules, and community commitments. The instructional leadership helps to compensate for direct parent involvement at the school level.

How does the parent fit into the school infrastructure when the assumption is the instructional leadership must be accountable? It is physically impossible for a cadre of administrators to govern effectively without supportive intermediaries. Hale posited the idea of creating in loco parentis committee for each elementary classroom. The committee included a parent representative from the respective classroom, a teaching peer at the same grade level, a community volunteer charged with the task to monitor underperforming students and develop plans for academic success in collaboration with the classroom teacher. Hale's premise was to focus on elementary students; she espoused that students adequately prepared in elementary school would be well equipped to progress in middle and high schools; the foundation and learning fundamentals would be mastered; they would be prepared for more challenging learning opportunities.

The third and final component of the model was cultural enrichment which was directed to elementary, middle and high school African-American students (Hale, 2001). Culture humanizes people. Culture needs to be cultivated in the classroom and school building and infused into the curriculum. Hale advocated for the school to be the central focus of upward mobility for African-American students because of its stabilizing force; all students are required to attend school regardless of their individual circumstances. Cultural enrichment programs are created through collaborative efforts involving school officials, parents, and the community. They are extracurricular activities that promote positive cultural awareness and identity. Once African-American students are able to establish their own identity and gain respect for their culture and its relevance, then they are able to navigate through school, challenges, and life and have a sense of purpose for the future. Students must find a balance in life to progress forward. A cultural enrichment

profile would serve as a fluid document on each student. It would guide the decisions of the types of activities that promote intellectual and social advancement. The profile included co-curricular, extracurricular, and community-oriented activities. African-American students need opportunities to participate in a broad array of activities. According to Hale (2001), mentoring of African-American male students by dedicated adult males may have a profound impact in the students' home culture and school life.

In the research literature, African-American males are portrayed as the least likely to succeed. Research has shown higher incidences of school behavioral issues, suspensions, and low performance on standardized test scores; the pronouncements and images have produced low self-esteem, psychological trauma and a sense of hopelessness (Quiett, 2012). Both the in loco parentis and cultural enrichment committees involve parent input and action; as a result social networks may be built between the school officials and parents (Hale, 2001). A collective voice empowered to close the gap may be developed and hopefully sustained. Students are empowered to pursue intellectual and social enrichment when presented with activity choices. They would be more invested in the educational process and the outcomes.

In the PSD, a concerted effort has been made to train teachers and educate students utilizing culturally appropriate pedagogy through the advancement of multiculturalism. These perspectives of honoring representative cultures are investment efforts to achieve academic success and reduce the gap between Caucasians and students of color.

Parenting Styles

The achievement gap has layers of complexity; Engerman and Bailey (2006) posited the existence of a relationship between family decision-making styles, peer group influences, and past academic achievements as predictors of academic achievement among African-American students. These influences do impact the academic performance of African-American students (Engerman & Bailey, 2006).

In Baumrind's (1991) study (as cited in Engerman & Bailey, 2006), three different types of parenting styles are discussed. They are authoritarian, authoritative, and permissive. The strictest form of parenting is authoritarian; parents set the rules, and the children follow them regardless to whether they agree with them or not. African-American parents tend to be more authoritarian. In the middle is the authoritative style of parenting, which allows for the children to express their individuality; the discipline is consistently applied in a supportive environment. The least restrictive form of parenting is the permissive style, which allows children many personal freedoms. The well-adjusted adolescents and higher academic achievers are mostly recipients of authoritative parenting.

In Berk's book (as cited in Engerman & Bailey, 2006), the application of parental discipline is reported to differ among racial groups based on different belief systems and practices. In general, the authoritarian style is more common among African-Americans than Caucasians; however, families across the board tend to be less authoritarian if they are classified in the higher social economic status category (Smetana, 2000). High achieving students were again found to typically receive parenting support that corresponds to the authoritative parenting style. Steinberg, Dornbusch, and Brown (1992)

questioned the notion that parent practices determined which racial groups excel in academics and which did not. They suggested Caucasian households generally practiced authoritative parenting; Caucasian students as well as Hispanics benefited more from authoritative parenting. However, Hispanics academic performance was similar to African-Americans, experiencing the lowest scores when compared to Asians and Caucasians. Asians excelled academically regardless to the parenting practice.

According to Hale (as cited in Stevens, 1984), young African-American mothers, especially between the ages of 15-19 years old, benefitted the most from living within an extended family household in which the maternal grandmothers resided and gave instruction on parenting based on the grandmothers' experiences; childrearing practices were transmitted from the grandmother to the young mother. The grandmothers parenting practices were less punitive and more interactive, which would be more consistent and in alignment with the authoritative style. One generation removed tended to soften the parenting approach for the grandmothers.

"Affiliating with high-achieving peers had a positive impact on grades, but the impact was stronger for adolescents from authoritative homes" (Engerman & Bailey, 2006, p. 445). High achieving students typically receive parenting support that is consistent which corresponds to the authoritative parenting style. Steinberg et al. (1992) concluded that positive support from parents and peers was the most significant predictor of academic success. Parenting practices may vary and differ based on parental educational attainment and racial composition; the important message to derive from the aforementioned discussion is parent involvement does matter in terms of student academic achievement.

Desegregation and Resegregation

Frankenberg, Lee, and Orfield (2003) study found that Caucasian students attend public schools in the South and West that were more interracially mixed than other regions of the United States. Public school students of color populations are approaching 40% of United States enrollment. In the South and West, students of color populations are approximately 50 percent. Latinos and Asians are experiencing dramatic growth increases. Latinos are the most racially isolated group, while Asians are the most racially integrated group, in terms of their neighborhoods and the public schools they attend. One-fourth of Latino and African-American students nationally attend the 27 largest urban public schools in the United States. "During the 1990s, the proportion of Black students in majority White schools has decreased by 13 percentage points, to a level lower than any year since 1968" (Frankenberg et al., 2003, p. 6).

The widest achievement gap exists between African-American and Caucasian students. The contributing factors impede progress toward closing the gap. As we continue to ponder how to find solutions, a look at neighborhood disadvantage has a prominent position among the contributors. All neighborhoods are not created equal in terms of resources, social capital, and relationship building or the lack of it due to ongoing mobility of residents. Neighborhood disadvantage embodies issues surrounding and/or involving social economic status, single parenting, and racial composition (Lee & Madyun, 2009). Neighborhood disadvantage is a consequence of broader societal issues which reach beyond individual influences. Within the neighborhood, there exist a culture that is reflective of circumstances and conditions of its residents. A culture of joblessness, struggle, hopelessness impacts the neighborhood adding to the psychological challenges

of everyday living. Many times, community leadership has advocated for resolutions of pressing social issues and then envisioned a trickledown effect which would positively influence and impact smaller entities such as schools and households.

According to Janowitz (as cited in Lee & Madyun, 2009), social organization theory posited the degree to which individuals within a community or neighborhood were influenced by factors that either promote or disrupt collective values and social support. When a promotion of healthy collective values existed, a community embraced values that served to be healthy and beneficial to the community. Thus marrying higher levels of social organization and social control established a relationship of development and maintenance of healthy social values. Wilson (as cited in Lee & Madyun, 2009) brought to the research community that the 1980s experienced an exodus of African-American families from the inner cities; thus the impact proved to be poorer, unhealthier outcomes. The remaining families kept collective values, but the support of these values stemmed from the residents and their resources which were considerably less than prior to 1980s. Ultimately, Wilson espoused the expectations and goals of the young people who remained in the inner cities depended upon adults, resources and options these adults collectively had to offer to the young people. The African-Americans who participated in the exodus had more resources and developed more social networks that contributed to school success. School success is inextricably linked to neighborhood disadvantage. School success for the masses has to address the broader societal ills (Lee and Madyun, 2009).

It is critically important to note that overcoming conditions and circumstances of neighborhood disadvantage has been adverted through the development and maintenance

of kinship support. This has been a resiliency strategy which explained how students from disadvantaged circumstances excel academically; these students did not embrace marginalization but performed with excellence despite their circumstances. There is school success among disadvantaged students, but the gap issues affect a significant portion of students of color; resiliency strategies may work for those strong enough to maximize the social networks and resources available to them.

The Impact of Summer Reading Instruction

Entwisle and Alexander (1994) compared African-American versus Caucasian student achievement in integrated and segregated (defined as predominantly African-American) schools. They found that African-American students in segregated schools made more progress in reading during the winter months than their counterparts in integrated schools. African-Americans, while not in school during the summer months, made significant gains in reading from integrated schools over those who attended segregated schools. Caucasians made the same progress whether they attended integrated or segregated schools during the winter or summer months. Generally, the Caucasian students came from households with educated parents. Students from both races who came from households with educated parents and attended integrated schools did not make the expected gains in reading during the school year. In the summer, students from educated households surpassed those students whose parents had dropped out of high school. Entwisle and Alexander (1994) suggested that schools need to exert their power in affecting cognitive growth. "Strong summer gains in reading made by the relatively more advantaged children of both races, however, testify to the critical importance of home resources when school is not open" (Entwisle & Alexander, 1994, p. 457).

Gary Huggins is the chief executive officer of the National Summer Learning Association in Baltimore, Maryland. He recommended that the schools and community stakeholders collaborate and develop engaging and innovative programs that ignite interest in reading and learning during the summer months. He espoused the notion that summer learning could serve as an experimental laboratory utilizing different teaching strategies and analyze the summer learning outcomes to direct the academic programs during the regular school year (Garland, 2012).

Child Trends is both a nonprofit and nonpartisan research center devoted to the study of children at every level of development. Terzian, Moore, & Hamilton (2009) of Child Trends asserted that there is a distinct difference between summer school and summer learning. It is most interesting to acknowledge that summer school is a shorter time duration, typically a half day devoted to academic instruction, and its student body is lower performing students focused on remediation; attendance is mandatory. Summer learning is voluntary, and its student body is composed of low, medium, and high performing students. Remediation is coupled with enrichment activities, activating critical thinking skills. The duration is full day; attendance is voluntary. A major piece of summer learning is building relationships with students' peers and teachers and other adult stakeholders. Terzian et al. (2009) were not advocating for one program over another because more research is needed in order to draw this conclusion. In PSD, there is a push for student work groups or cooperative learning groups with students of differing abilities working together. The collaboration enhances learning for all concerned. The focus on remediation without enrichment activities has tended to produce

a system that resembles academic tracking in which low performing students have been separated from the medium and high performing students.

In terms of widening the gap, summer months have proven detrimental to students' academic growth and personal well being from lower income households. According to Alexander, Entwisle, and Olson (2007), disadvantaged students are more likely to experience academic and health development setbacks in the summer due to the lack of adequate resources which support growth. Since 1906, thirty-nine empirical studies investigated summer learning loss, and the research findings provide evidence which support the existence and continuance of learning loss. The consistency of these findings are perplexing because reversing these findings requires a paradigm shift in the allocation of human, material and financial resources (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996).

In February 2009, President Obama signed into law the American Recovery and Reinvestment Act (ARRA); it was a stimulus bill which included over $100 billion for educational disbursements; funding of summer learning programs were acceptable and appropriate uses. The stimulus funding provided $13 billion additional dollars over a two-year period for Title I programs which served to assist disadvantaged students with emphasis on reaching high levels of academic achievement (Fairchild, Smink, & Stewart, 2009). Summer learning programs were available, but advocates were needed to present compelling cases for the allocations to summer learning and the educational benefits; competition for different programs has created a competitive environment. Summer learning programs are a collaboration of public and private partnerships. The gap is a major educational issue; dollars directed toward reduction or elimination of this gap

should take precedence since summer vacation is an annual occurrence. The summer learning loss is too great to ignore or minimize. A 1996 United States Department of Education survey provided the only available data which revealed 37% of Title I principals used its allocations for summer learning; this is the most recent data available at this time (Fairchild et al., 2009).

Summer Strong is in its first year; PSD moved away from the traditional summer school programs of the past focused on remediation and moved toward a collaboration of City Site of Research community partnerships which included the city, county, park and recreation, police, and Youth Coordinating Board. The curriculum was engaging, rigorous, and included hands-on learning activities; it was basic curriculum with acceleration. Critical thinking skills were activated with acceleration and hands-on activities. The PSD superintendent espoused the importance and necessity of summer school learning in terms of achieving and maintaining academic achievement for struggling students.

> Summer school not only boosts the achievement of students needing additional support, but keeps students on track toward at- and above-grade level proficiency, said Participating School District's, superintendent of schools. The more time students are in school, the more time we have to help them succeed and make academic strides. (Peters, 2012, para.3)

It is interesting to learn the SES and family structure that are represented in the general public which are more likely to participate in summer learning. Two parent households (biological or adoptive) represented 28 percent of the students within this family structure in summer programs as compared to 72 percent of the students within the

above-forementioned family structure were not enrolled in summer school. Single parent households headed by mothers represented 21 percent within this family structure in summer programs as compared to 79 percent of the students were not enrolled. Students living 200% below the poverty line were less likely to attend out-of-school time programs; 9 percent attended versus 91 percent of these students did not attend summer programs. Students living 200% above the poverty line attended out-of-school time programs; 34 percent attended versus 66% of these students did not attend (Terzian et al., 2009).

The summer learning losses accumulate over the years; they can be a determinant whether learners take the path to college or drop out of high school. Two-thirds of the ninth grade gap can be explained by cumulative summer learning losses during students' elementary/middle school years Alexander (2009). The gap is calculated by multiplying 3 months by 10 summers which is approximately 3 years of learning. At some point, the gap is significant enough that recovery is perceived to be beyond one's grasp. A very troubling revelation is to comprehend how the impact of approximately three months of virtually no gains may compound annually and accrue to monumental disparities between students of colors and Caucasians. African-American economist and educator, Dr. Jawanza Kunjufu published an appeal in African-American newspapers across the United States for parents to read with their children during the summer months and to participate in a series of learning activities centered around reading by visiting the public libraries, museums, colleges and other worthwhile academic activities. His appeal did not exclude but encouraged single parents, low-income family households, and parents who did not

achieve high level educational attainment. The parents must be the driving force behind the effort (Kunjufu, 2012).

Kim (2009) recommended an ABC approach to an effective voluntary summer reading program for teachers or parents to implement and produce results that would show improvement in academics and standardized testing outcomes in the following school term. A was students must have access to a variety of books. B was books must match the ability and interest of students. Building reading skills accompanied with vocabulary expansion was the focus. C was comprehension of the reading materials. Comprehension may be monitored or measured by teachers or parents. Students are questioned on the content; the adults guide the discussion and probe for deeper understandings.

According to Kim (2006), an experimental study examined the effects of a voluntary reading intervention program of 552 fourth grade students from a large ethnicly diverse and high SES school district in one of the Mid-Atlantic States during the summer months of June, July, and August. The randomized field trial involved four Title I schools and six non-Title I schools. The students received reading lessons in June while attending school; they were instructed to practice oral reading with an older family member, and were involved in comprehension strategies as the students practiced independent silent reading. They received eight books at their home on a bi-weekly basis during July and August. Fourth grade is a pivotal point in the reading process; generally students are prepared to make the transition from learning to read to reading to learn. In order for the transition to be effective, the student would need to have mastered the fundamentals of reading. “The estimated treatment effects on a standardized test of reading achievement

(Iowa Test of Basic Skills) were largest for students who reported owning fewer books at home, less fluent readers, and minority students" (Kim, 2006, p. 2). The results of the experimental study suggested a strong need for students to read during the summer months in order to make significant gains in reading and learning, and for the schools to press upon the parents to create and maintain an environment at home for reading while school is not in session.

According to Borman, Slavin, Cheung, Chamberlain, Madden, and Chambers, and D'Agostino and Murphy (as cited in Kim, 2006), a NCLB requirement for public schools is the implementation of scientifically-based reading interventions which are based on experimental evidence. The requirement stemmed from the known reality that many subgroups are not performing at grade level or proficiency level on standardized tests. The subgroups included students from low-income households or students of color. In PSD, reading specialists are teaching reading to mainstream students needing additional academic support as part of the core curriculum. Reading instruction may replace students' opportunity to enroll in foreign language and/or other elective courses in middle and high schools. Reading is taught during the school year, after school and continues in summer school. Parents are encouraged to engage their children as well as themselves in reading utilizing reading strategies taught in both regular and summer school terms.

It is interesting to note that the achievement gap has multiple elements to ponder; each researcher needs to focus on one major element and any sub-related elements and how to impact the *whole* issue of achievement. Parent involvement was a key element in the aforementioned study.

Wealth, Income, and Social Class

The achievement gap, "which appears early in elementary school, develops into differences in high school graduation rates, college attendance and completion, and ultimately, the differences in income and socioeconomic status (SES) that underlie the most critical social inequities" (Slavin & Madden, 2006, p. 389). The achievement gap continues to increase over the duration of students' educational career and has long-lasting consequences that impact the livelihood and implications for living in poverty and being employed doing less than meaningful or fulfilling work.

Algernon Austin is a researcher and the director of Economic Policy Institute's Program on Race, Ethnicity and the Economy. In the United States, all demographic groups felt the painful reality of high unemployment during the recent recession. African-Americans and Latinos endured an even greater share than Caucasians. During 2007, Caucasian unemployment averaged 4.1% compared to 8.3% for African-Americans. During 2011, Caucasians averaged 7.9 % compared to 15.8% for African-Americans (Austin, 2012a). A glance by states at the third quarter of 2011 is disturbing to review. Among Caucasians, the highest unemployment rate was 11.7% in Nevada, and the lowest was 2.2% in North Dakota. Among Latinos, the highest unemployment rate was 19.6% in Rhode Island; the lowest rate was 4.6% in Virginia. Among African-Americans, the highest unemployment rate is 27.4% in SSR; the lowest rate was 7.3% in Maryland (Austin, 2012b). "The biggest black-white unemployment rate disparity was in the City Site of Research metropolitan area, where the black unemployment rate was 3.3 times the white rate" (Austin, 2012c, para. 6). The reason for the wide unemployment gap between Caucasians and African-Americans is the persistent wider than normal achievement gap

in SSR. Caucasians are excelling more than average for Caucasians; African-Americans are performing lower than average for African-Americans; thus the wide disparity exists in SSR (Gilbert, 2012). There is a relationship between academic achievement and employment rates. According to Slavin and Madden (2006), the achievement gap is the most pressing issue in education.

Roscigno (2000) described the educational plight of African-American and Hispanic students as difficult because the institutionalization of family and schools were influenced by race, ethnicity, segregation, and social class conflict. The results have been African-Americans and Hispanics who do not perform academically as well as Caucasians. He supported that income and parental education are two key SES indicators that directly impact achievement.

Orr (2003) found that a family's wealth is a positive contributor to children's academic achievement and provides more in depth explanations for the persistence of the African-American-Caucasian achievement gap than the three traditional components. Traditionally, social economic status (SES) has included three major components: income, education, and occupation (Orr, 2003). More recently, wealth has been considered a major component and should be differentiated from income; minimal attention has been placed in the research literature on household wealth or net worth (Yeung & Conley, 2008). Racial wealth disparities are relevant to the achievement gap issue because African-Americans generally have acquired less wealth compared to Caucasians, such as home ownership and investments. In Wolff's (1999) study (as cited in Yeung & Conley, 2008) African-Americans' family median net worth was one-eighth of their Caucasian counterparts. Beyond median level, at every net worth level an

African-American-Caucasian gap existed. Orr (2003) espoused that wealth may be a component that contributes to the educational disadvantage in light of the fact that African-Americans and Caucasians can earn equal incomes and still have a vast difference in net worth. However, it should be noted that findings from Orr's (2003) study yielded that parent's occupation remained statistically significant; it was the only one out of the three SES traditional components to do so.

With wealth comes the accessibility to varying types of capitals: they are social and cultural capital. Social capital is generated through networking. Connections are established between individuals and/or communities to provide sustainable social support systems. The networks are social in nature; they may be considered as kinships which have reciprocal benefits. Cultural capital relates to status and enriched learning experiences in the arts, literature, and museum exhibitions and lectures (Orr, 2003). When students are exposed to cultural capital, they have opportunities to learn new vocabularies, and expanded vocabularies may lead to improvement in reading comprehension among students.

Hale (2001) advocated for "cultural capital" enrichment activities, also known as extracurricular, during the school day. Time is allocated within the school week for all students to participate with a focus on cultural expansion. Everyone has a culture; through culture, we as a people are humanized. Hale is promoting the ideas that culture matters; there are parents who are not able to provide enriched learning experiences to their children; and, as a result, the testing data reveals racial disparities. I believe many students struggle academically because they are unable to place unfamiliar readings and vocabularies into a relevant context. Context provides a reference point to launch

learning and understanding. Whether or not one's culture is prominently integrated into the readings on standardized tests, students are placed at a disadvantaged when parental involvement with varied learning experiences has not occurred.

Hale (2001) further promoted that the parents could provide substantial guidance and input in designing the enrichment activities. Her beliefs were that parents may not be able to afford the time, financial resources, and personal energies to expose their own children to enrichment activities; however, by having the parents provide input, the different cultures represented in a school could be recognized as valuable to learning.

"Human capital includes parent skills, acquired both formally and informally, that are valuable in the labor market and at home" (Duncan & Magnuson, 2005, p. 40). Formal schooling is one of the most prominent features of human capital. Research supports the notion that more schooling will yield higher earnings and better employment. However, beyond financial benefits, effective parenting skills lead to enhancement in their children's well-being. Students are more likely to score higher on academic achievement tests if their parents are highly educated. According to Duncan and Magnuson (2005), the link or connection between parental education and children's cognitive development may appear as early as three months old.

Human capital refers to knowledge and skills parents have acquired through education and life experiences; parents are the first people in children's lives to impart knowledge (Willingham, 2012). Human capital is distributed on a continuum representing varying levels of it both in depth and breadth; those parents who have a substantial amount or the upper range of the continuum are most likely to provide intellectually stimulating and healthy environments for their children's cognitive

development. Family investment theories support the notion that high SES families can reduce risk factors that negatively impact their children's ability to reach successful academic levels (Willingham, 2012). High-ses families have access to higher quality health care services, daycare, and housing, and they engage in discussion with their children with expanded vocabulary and more complex syntax.

Parents need to be empowered with the knowledge that they have different types and degrees of capital to share with their children (human, social, and cultural). The capitals are interwoven into one other; the higher on the scale of each capital type, the more empowered parents are to improve their children's academic achievement.

Rothstein (2004a) discussed the impact that social class has on learning. He espoused that children raised by parents whose occupations were professional have a more inquisitive nature toward their school lessons as compared to children raised by working-class parents. He concluded that on average academic achievement among children of working-class parents would be less than their counterparts with higher occupational parents.

The analyses in the Fuligni's (1997) study provided descriptions of differences in academic achievement among immigrant students. The English language can serve as a challenge. Philippine and European students were more familiar with English when compared to Latin American students. The parents of Latin American students tended to be less educated and employed on jobs that paid lower wages or salaries. The immigrant students who came from English-speaking homes and had more educated parents performed academically better than their counterparts. Fuligni (1997) espoused that the

use of language accounted for a portion of achievement differences as it is related to SES among different ethnic groups.

In contrast to these findings favoring higher SES groups, Harvest Preparatory School (Harvest Prep) is an example of achievement, excellence, and equity with a student population of 99% African-American whose family income statuses qualify 91% of the student body for free or reduced lunch status (Brown, 2012). Harvest Prep is a conglomerate of learning institutions from preschool to eighth grades; it houses five charter schools on the north side of City Site of Research (CSR) in one building; they are: Success in Educational Evolutionary Development Academy (SEED- ages 3-5), Harvest Preparatory School (K-6, co-ed), Boys in Engineering Science and Technology Academy (BEST- K-8), Sisters in Science Technology, Engineering and Medicine Academy (SISTER- K-8), and Best Academy East (K-8, co-ed) (Brown, 2012).

In 2011, SSRCA-II testing results at Harvest Prep and BEST Academy closely met or exceeded State Site of Research's average scores for reading and math at all the grade levels (3^{rd} – 6^{th}), essentially closing the achievement gap. Harvest Prep scored 77% proficiency, and Best scored 73% proficiency in reading compared to SSR's average reading proficiency score of 75 %. Eighth grade boys and girls ranked number three in the state for reading proficiency. Eric Mahmoud, founder of Harvest Prep and BEST remained focus on making needed improvements in order to continue academic achievement (Barney, 2011).

PSD's superintendent espoused: "Education is the great equalizer in the fight against poverty" (Participating School District, 2012b). In a bold decision, PSD's superintendent recommended to PSD school board to approve an kindergarten through

eighth grade charter school located on the north side of CSR based on the philosophy and strategies of Harvest Preparatory School. The Mastery School opened school term 2012-2013 with grades kindergarten through second grades, and one grade level per year will be added until the school becomes a K-8 charter school (Brown, 2012).

Harvest Prep's success model is based on a 5-pronged approach; there are five gaps: preparation, belief, time, teaching, and leadership (African-American Leadership Forum, 2011). Preparation gap focuses on school readiness which occurs prior to the child entering kindergarten; the entire family must be supported through community resources when necessary, and all children must have access to high-quality early education. The belief gap trumps all five because the child, parents, school, and community must believe African-American children are capable of reaching high academic achievement; without the belief in African-American children, it is senseless to proceed with and pursue the other gaps. The time gap acknowledges that students lag behind in terms of achievement; it is imperative that time is given to acquire the necessary skills for academic success; Harvest Prep devotes 100 minutes to reading each day; school operates on a 200-day schedule, eight hours each day. This additional time amounts to 28 extra school days and 1.5 hours daily. The teaching gap focuses on teaching and learning; Harvest Prep employs highly effective, dedicated teachers; this dedication is important to the development of its students. The leadership gap is second to the teaching gap. The leadership must have the authority to hire the teachers for the school and have proven success models to follow.

Standardized Testing

With all the standards-based reforms in place as well as NCLB Act requirements, we as a nation are living in an age of accountability testing where all students are expected to succeed academically as evident by individual proficiency and school-wide achievement on standardized tests and assessments (Manning & Kovach, 2003).

In supporting this level of accountability, Wolf (2007) is a proponent of regular assessment and standardized testing. He espoused that assessments and testing yield valuable information about students' progress in acquiring skills and knowledge. Parents, students, and teachers would gain the most of all stakeholders because feedback from data collection is provided at different intervals during the school term that identifies strengths and weaknesses in students' individual performances as well as the entire school and allows for corrective measures. Wolf acknowledged that his beliefs are contrary to media reports and public opinion. Nichols (2007) advocated that standardized testing has narrowed students' academic pursuits and experiences to a high-stakes testing focus that is contrary to becoming independent and critical thinkers.

Jencks and Phillips (1998) have documented and contended that the impact of the African-American-Caucasian test gap has costly consequences both economically and socially. The gap is evident from pre-kindergarten to adulthood. African-Americans in general have performed lower than Caucasians on reading, vocabulary, and math tests. Their data show that the gap has narrowed since 1970 and could continue to do so if both African-Americans and Caucasians would galvanize their efforts to close the gap. Jencks and Phillips promoted the idea that more than a generation would pass before any significant difference would disappear. They did believe the gap could close because

African-Americans are narrowing the gap by raising or increasing their test scores and not because Caucasians are performing less. An encouraging indicator, the National Assessment of Educational Progress (NAEP) data revealed that 17-year-olds narrowed the reading gap between 1971 and 1994 by more than two-fifths. In Hedges and Newell (1998) study (as cited Orr, 2003), the achievement gap may take approximately 50 years to close based on the rate of change of the narrowing of the African-American-Caucasian standardized test scores.

Perspectives on the Conceptual Model

Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins and Closson (2005) espoused that parent involvement has been connected to and associated with positive student achievement in the classroom and on standardized tests. More importantly, this assertion was supported across SES and ethnicities. (Miedel & Reynolds, 1999; Grolnick, Kurowski, Dunlap, & Hevey, 2000). As students move beyond elementary school, parent involvement has tended to decline; however, if the parents have made adjustments which were developmentally appropriate, high school students benefited from the parent involvement (Simon, 2004). Primarily psychological and supplementary perspectives of anthropology, education, and sociology were collaborated to allow for greater examination of the motivations and contributions of parent involvement on achievement in the conceptual model (Hoover-Dempsey et al., 2005). The major areas of the model are: (a) personal motivators related to parental role construction (Valence and Role Activity Beliefs) for involvement, and Parental Efficacy for helping the student succeed; (b) parents' perception of contextual invitations to involvement related to general invitations from the school, specific invitations from the teacher and from the student;

and (c) school responsiveness to family life context variables related to parental knowledge and skills, and parental time and energy. The combination of the three aforementioned areas lead to an elevated first level of parent involvement forms which reflect the choices parents have to involve themselves at home and/or school (Hoover-Dempsey & Sandler, 2005).

Hoover-Dempsey et al. (2005) asserted that parent involvement methods should be shown by school personnel respectfully to any parents lacking the knowledge but were willing to become involved. Parent involvement was more effective with school principals and teachers leading the opportunities to invite and engage parents in their childrens' academics both at the school and in the home (Hoover-Dempsey et al., 2005). However, school personnel should not view parent involvement through a narrow len in which the acts of attending a majority of school functions and volunteering on a regualar basis were considered traditional expectations. For parents whose working hours were inflexible, their absences at school events were not to be interpreted as delinquent or nonresponsive. Such thinking and subsequent actions/interactions could create barriers to future collaboration between the schools and parents on behalf of the students.

Literature used by Hoover-Dempsey to develop the model included Shaver and Walls (1998), Simon (2004) and others. Shaver and Walls' (1998) study of Title I elementary and middle school students examined the effects of parent involvement on reading scores utilizing Epstein's (1995) six types of parent involvement (as cited in Walker et al., 2005) and Rich's MegaSkills (1992) parent involvement model (as cited in Walker et al., 2005). The parents were divided into two groups based on whether the parent attended at least 50 percent of the parent sessions or less than 50 percent. The

results showed improved student achievement based on standardized tests administered before the parenting sessions were started and after the parent sessions were completed.The findings showed that the most improved were among the elementary students and the higher level SES students. The recommendation derived from the study was to employ multiple and varied methods of parent involvement for students at-risk of failing. It is important to have parenting sessions that inform parents how to support reading for their children in the home and at school. Parents have both positive and direct influence on their children's academic abilities.

Personal Parental Motivators

Drummond and Stipek (2004) espoused that role construction was a strong motivator for parents' decisions to become actively involved in their childrens' learning among African-American, Caucasian, and Hispanic elementary students. Mainly, parents believed that their roles were important and socially influenced based on recommendations made by the school on specific tasks and practices. Parents felt that they were making a positive contribution to the learning process. More importantly, parents believed that their responsibilities were personal and/or shared with the schools for their children's learning and academic success.

Parental self efficacy was described by Bandura, Barbaranelli, Caprara and Pastorelli (1996) as the second personal motivator in parents decision making process to determine goals that parents believed could be accomplished based on their active involvement in their children's education. Parental self efficacy is socially constructed and influenced by family and schools exerting their influences on parents' abilities to

help their children in an efficacious manner. The above mentioned findings are consistent across varied SES and ethnicity groups.

Parents' Perception of Contextual Invitations

Hoover-Dempsey and Sandler (1997) asserted that invitations to parents motivated them to become involved in their children's education. The three sources were general (school climate), teachers, and students that generated increased parent involvement. Invitations were considered declarations of parents' importance to student achievement; parents interpreted these sources of invitations as acts of declarations in which their participation provided value to engaging students in school and leading to student achievement. General School Invitations provided a positive and welcoming school climate; principals provided the leadership for general invitations. Teachers provided the leadership and promotion of Specific School Invitations because teachers advocated that parental action was powerful and affected student learning positively. Teacher invitations were most effective if (a) they were varied in format, (b) a request was made to the parents to work with their children at home, and (c) a request was made to parents to attend activities or workshops. More varied the invitations increased the likelihood that more parents would become involved. Therefore, different types of students needs were addressed and processes to meet the learning needs. Students provided the leaderhip for Specific Child Invitations; students' requests for parent involvement generated and motivated responsiveness to the most direct and immediate learning needs of their children. The above mentioned findings are consistent across varied SES and ethnicity groups.

Family Life Context

Family life context variables were identified as the third motivator to the decision-making process for parents to become involved in their children's education. The variables are Time and Energy and Knowledge and Skills. According to Hoover-Dempsey and Sandler (1995, 1997), family SES in association with accessibility to resources provided a clearer explanation of why parent involvement differences existed among varying levels of SES. They espoused the need to make accommodations for the variations and plan opportunities for parents at varying levels of SES to become involved. The interpretation of the differences can lead to assumptions that low-ses parents are not interested in their children's achievement because of a lack of visible, sustained involvement. Low-ses parents are associated with lesser school-related knowledge and skills due in part to lower educational attainment meaning high school graduation and little to no postsecondary training or college programs. Low-ses is associated with parents who may work longer hours to provide for the living needs of their families. Low-ses parents may have limited time and energy to become involved parents in contrast to medium SES and high-ses parents. Schools need to provide accessibility to resources based on availability and appropriateness of the resources to support and increase parent involvement. Finally, according to Dauber and Epstein (1993), Specific School Invitations were the best predictors of Home Involvement and School Involvement for elementary and middle schools through teacher invitations and school programs which promoted parent involvement.

Summary

Educational pioneer and pragmatist, John Dewey advocated that educators need to learn about the conditions of the community in which they teach. They need to acquire the perspectives that have impacted the community historically, economically and occupationally. These perspectives help to build a relationship and understanding on which to connect "knowledge of experience and content of new knowledge" (Williams, 2003, p. 21) toward meaningful learning among students. Between 1970 and 1990, the African-American and Caucasian achievement gap was reduced by 50 percent in reading and approximately 33 percent in mathematics. Since the 1990s, it has reversed this progress and continued to widen until 2007; on average, lower income students and students of color fall three grade levels behind Caucasians by the time they enter eighth grade (Manning & Kovach, 2003; Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009).

Students perform academically better when they have parents and a family network that supports, nurtures, teaches, and provides for them. The first teachers students have are their parents; strong, resilient parents teach their children through example how to cope with stress and meet high expectations (Winfield, 1991). It is critical for students to feel supported and protected within their social environment. When students face struggles in their school lives, it can be reassuring to know that their parents support them and provide a safety net.

A disturbing reality is that with all the standards-based reforms in place as well as the NCLB Act requirements, we as a nation have such alarming disparities among school-aged students. The achievement gap appears prior to students entering

kindergarten; a holistic approach to closing the gap requires that parent education programs be put in place to curtail the persistent gap (Manning & Kovach, 2003). These programs would be designed to support student learning inside and outside the classroom. Many parents need guidance on how to best assist their children in pursuing academic excellence (Trumbull, Greenfield, & Quiroz, 2003).

Connections exist between the survey dimensions and the six areas of parent involvement provided in the literature review. The survey for the study included three dimensions: (a) personal motivators, (b) contextual invitation motivators, and (c) family life context. The survey dimensions are influenced by (a) family structure, (b) school structure, (c) parenting styles, (d) desegregation and resegregation, (e) wealth, income, and social class, and (f) standardized testing. More specifically, connecting the literature to the survey instrument provides insight into parenting behaviors. Time and Energy and Parent Efficacy are influenced by family structure; the more adult members of the family in the household, the lesser amount of time and energy exerted and needed by one parent. Parent Efficacy addresses the belief of parental actions in accomplishing academic goals. Therefore, desegregation and resegregation are paired with parent efficacy.

School structure is a major factor into the type and appropriateness of the General Invitations and the Specific School Invitations. The school administration needs to establish a welcoming climate. The teachers need to provide invitations for parent involvement in multiple forms. Parenting styles are related to Valence, which is a parental attitude toward schools, and Role Activity Beliefs, which delve into the important role of parents in student achievement. The types of parenting styles are authoritative, authoritarian, and permissive. The authoritative parenting style aligns with

higher levels of Valence and Role Activity Beliefs. Higher levels of wealth, income and social class allow for increased frequency of school involvement by parents. Finally, standardized testing results are more likely to increase with Specific Child Invitations, Knowledge and Skills and Home Involvement because childrens' request for their parents assistance activates parent involvement. Increased Knowledge and Skills may indicate higher skill sets among parents coupled with increased frequency of Home Involvement.

The achievement gap is comprised of multiple factors. The following are a few of the factors discussed in the review of literature: family structure, school structure, parenting styles, desegregation and resegregation, wealth, income, and social class, and standardized testing. The combinations and persistence and/or continued existence of differences among children on these factors are the reasons the gap continues to exist or make the gap more visible. Family structure was identified as an important component of parent involvement. Two-parent households were more beneficial to student achievement than single-parent households; specifically, single mothers with preschool children can face challenges that adversely affect student achievement.

School structure is markedly different between elementary and secondary settings. Parent involvement at the school level lessens as students make transitions from elementary to secondary settings. When Title I funding is available to school sites and districts, research–based reading intervention programs and parent educational training have shown gains in student achievement.

Authoritarian, authoritative, and permissive are three distinct parenting styles. Authoritative style has been common among higher achieving students across racial groups. Authoritarian style has been more common among African-American students.

Parental support was deemed more effective than any one of the aforementioned parenting styles.

As we regress from desegregation to resegregation in our large urban public schools, we are finding that Caucasians and students of color are attending schools that are racially isolated, and the thrust of the 1954 Brown versus Board of Education Supreme Court decision is in jeopardy of remaining viable and relevant. Increased academic learning and instructional time periods beyond the standard nine-month school year are crucial to avert the regression or ill effects of reverting to the educational system of a pre-Brown decision era. Summer academic growth is more likely to be the result in resegregated schools when the financial investment in summer learning is employed and used to reverse academic decline.

The addition of wealth as an element of SES has shed new light on the racial disparities in achievement; with increased wealth, parents are able to provide more cultural capital opportunities and learning experiences for their children. We must acknowledge as a nation that accountability is at least an expectation, if not a mandate, on behalf of parents, students, and teachers. We are functioning in an age of standards-based curriculum and standardized testing to meet the requirements of NCLB. Many students of color are disproportionately not meeting the prescribed proficiency levels when compared to Caucasians. Schools can help compensate when lower SES is dominant in a school district by integrating "cultural capital" enrichment activities, also known as extracurricular, during the school day (Hale, 2001).

It is crucial for all researchers to identify factors, conduct research and add to the body of knowledge. My present study will add to the body of knowledge by examining

relationships of the relative strength of parent involvement versus ethnicity in predicting student achievement, and to what extent, if any, the academic achievement gap is affected. The study will help one school district develop programs that have the potential to move the process forward of closing the achievement gap. It will extend the literature base described here by providing research-based data to district leadership where the overriding issue of the achievement gap is a major piece of the district's strategic plans to prepare students to be contributing global citizens. Hoover-Dempsey (2005) was used as the conceptual model to guide the present study

Chapter 3: Method

The research method for the present study is described in this chapter. First, the purpose and research question are provided. Second, the post positivism epistemology and the research design are described. Next, the sample and target populations are defined, which is followed by a description of the parent involvement instrument and the reading achievement measure. Next, descriptions of the procedures followed in the study and missing data are described. Sixth, the predictor, dependent, and control variables are defined. Finally, the data collection process and data analysis are provided.

Purpose and Research Question

The research problem of the present study was to investigate the relative strength of parent involvement versus ethnicity in explaining the academic achievement gap between the racial backgrounds of Caucasian, African-American, Native American, Asian, and Hispanic students as measured by the reading portion of the SSRCA-II assessment. By investigating the relationships between parent involvement, ethnicity, and student achievement, the results may lead to school policies and programs which empower urban parents, teachers and stakeholders to maximize the efficacy of parent involvement (Jeynes, 2007).

The present study is seeking to answer the following research question: What is the relative strength of parent involvement versus ethnicity in predicting student achievement? It was hypothesized that parent involvement would be a stronger predictor of student achievement than ethnicity. The research literature suggests that parent involvement aids in academic success for all racial groups; obviously there are varying degrees of involvement and success (Jeynes, 2003; Mau, 1997; Sanders, 1998). African-

American, Asian, Caucasian, Hispanic, and Native American parents all have the potential to contribute positively to the academic success of their children.

Post Positivism

The Web Center for Social Research Methods (2006) makes the distinction between epistemology and methodology. "Epistemology is the philosophy of knowledge or of how we come to know. Methodology is also concerned with how we come to know, but is much more practical in nature" (Web Center for Social Research Methods, 2006, ¶ 1). Therefore, epistemology and methodology are closely related to each other. Methodology emphasizes the methods used to gain a better understanding of our world (Web Center for Social Research Methods, 2006). "Post positivism is an epistemology that assumes an objective reality, but that this objective reality can only be known imperfectly. According to post positivism, theories about objective reality cannot be validated in an absolute sense, but their validity can be strengthened through their resistance to research efforts to refute them" (Gall, Gall, & Borg, 2007, p. 16). The present study's chosen methodology is specifically post positivism; there are six epistemological assumptions that are underlying the methodology.

According to Gall et al. (2007), the six epistemological assumptions associated with post positivism are: (a) objective social reality; (b) "research observations are theory laden" (p. 17); (c) "features of the social environment retain a high degree of constancy across time and space; the assumption of constancy justifies their search for what is generally true of the social environment" (p. 25); (d) study samples and populations can be identified to make generalizations; (e) "the use of quantification is helpful to represent

and analyze features of social reality" (p. 26); and (f) "positivist researchers have what may be described as a 'mechanical' view of causation" (p. 28).

Positivists align themselves with the mechanical view of causation. "Causation permeates positivist research in the social sciences" (Gall et al., 2007, p. 29). "Researchers seek to identify cause-and-effect relationships by forming groups of individuals in whom the independent variable is present or absent—or present at several levels—and then determining whether the groups differ on the dependent variable" (Gall et al., 2007, p. 306).

Research Design

The present correlational cross-sectional study was designed to determine whether, and to what extent, a relationship exists between the predictor variables and the dependent variable, in this case, the relative strength of parent involvement versus ethnicity in predicting academic achievement as measured by the SSRCA-II standardized reading assessment. A major limitation to the study was the data were purely descriptive and not experimental; the predictor variables were not controlled or manipulated during the correlational cross-sectional research. According to Gall et al. (2007), the correlational cross-sectional research design provides inferences that are tentative because data are only collected at a single point in time (limiting longitudinal inferences), and the researcher does not control or manipulate any variables (limiting causal inferences, i.e., internal validity). As such, in the present study the safest interpretation of the results would be that understanding the relative strength of parent involvement versus ethnicity provides an important piece of information to closing the academic achievement gap; other influences of a prominent nature may also be in existence. Hoover-Dempsey

and Sandler (2005) developed a conceptual model on the parent involvement process, and its highest level was student achievement. The underlying premise was that parent involvement leads to student achievement. The model, yet to be described in the context of the survey tool, is used in this study to investigate the relative strength of the relationships between parent involvement and ethnicity in predicting student achievement. The study's focus expands the conceptual model based on the context and the inclusion of racial backgrounds.

Sample and Target Population

The sample is drawn from Connecting Parents to Educational Opportunities (CPEO) parents and their children who are in the district which was the site for this research. CPEO is a parent involvement program that empowers parents to acquire and utilize the necessary skills and tools to develop positive partnerships between home and school with the outcome of supporting their children's academic achievement (CPEO, 2010). To be classified as a CPEO parent, he/she had to have completed a seven-week course at one of the research participant's Title I school sites since its 2008 inception year to present. In the fall of 2010, total school district student enrollment was 33,418 students from kindergarten through twelfth grade; the composition of student racial backgrounds was 37% African-American, 32% Caucasian, 18% Hispanic, 8% Asian, and 5% Native American students (Participating Research School District, 2012b).

The composition of student racial backgrounds in the present study was 53% Caucasian and 25% African-American students, which made up 78% of the sample. Hispanic, Asian, and Native American students at percentages of 12%, 7%, and 3%, respectively, represented the remaining 22% of the sample. This distribution in the

sample of ethnicities differs from the district's distribution of ethnicities. Caucasian and African-American students are more evenly represented in the participating district with 37% African-American and 32% Caucasian students (Participating School District, 2012b). In the present study, parents of Caucasian students participated at more than twice the proportion of African-American students, while African-American students responded at more than twice the proportion of the remaining racial groups. With regard to gender of the students, the male frequency percentage was 58% compared to the female's percentage of 42%. One percent separated students who were eligible for free lunch at 47% from full-pay students at 46%. Students eligible for reduced lunch status comprised the remaining 7% of the sample. Home language was dominated by English speakers at a percentage of 80%, which mostly included Caucasian and African-American students. Spanish and Hmong speakers were 9% and 7%, respectively, compared to Native American and Somali speakers each at percentages of 2%. The Somali students were grouped with the African-American students in the previous percentages (see Table 1 for student demographic descriptives for the sample and participating district).

Table 1 *Student Demographic Descriptives for the Sample and Participating District*

Variables		Sample		District	
		%	*n*	*%*	*n*
Ethnicity	African-American	25.0	31	37.0	12,395
	Asian	7.0	9	8.0	2,728
	Caucasian	53.0	67	32.0	10,646
	Hispanic	12.0	15	18.0	6,034
	Native American	3.0	4	5.0	1,615
	Total		126		
Gender	Male	58.0	73		
	Female	42.0	53		
	Total		126		
Lunch status	Full pay	46.0	58		
	Reduced price	7.0	9		
	Free	47.0	59		
	Total		126		
Home Language	English	80.0	101		
	Hmong	7.0	9		
	Native American	2.0	2		
	Somali	2.0	3		
	Spanish	9.0	11		
	Total		126		

The external validity or generalizability of the findings can be minimally applied to an urban district of similar size, but it is believed that generalizability can be maximized to other urban school districts ranging from 30,000 to 40,000 in student population with significant populations represented from students of color. The difference between sample and target populations was a limitation to the present study as it limited the external validity of the results and subsequent inferences.

Instruments

This section provides a description of the instruments used in the study. First, the parent involvement variables are described, which includes a presentation of the parent involvement survey and its ten subscales with reliability and validity analyses. Second, the reading achievement variable is described, which includes a discussion of reliability and validity evidence. Reading achievement was measured using the SSRCA-II tests, administered by the state. Finally, ethnicity and free and reduced lunch status data were collected from the district.

Parent Involvement

The conceptual model of the parent involvement process supported the research question: it is important to discuss the model from another perspective in terms of how it was used to develop the Parent Involvement Project Parent Questionnaire (PIPPQ) instrument which was used in the study. The PIPPQ was developed by the Family-School Partnership Lab at Vanderbilt University in Nashville, Tennessee (see Appendix A). The PIPPQ is a self-report paper and pencil instrument that was used to measure the nature of parent involvement among CPEO parents in the district which was the site for this research. Hoover-Dempsey and Sandler (2005) are the architects of the conceptual model

of the parent involvement process. The 2005 model is a revised version (See Appendix C). Hoover-Dempsey and Sandler (1995, 1997) developed the original version of the model. A three-year project was funded by Office of Educational Research and Innovation from 2001 to 2004. The purpose of the project was: (a) to develop and refine the scales needed for testing the model, and (b) to examine the elements of the model. As a result of the project, levels one and two were combined to include main three constructs: (a) personal motivation, (b) invitations, and (c) life context. "These three overarching constructs represent the psychological underpinnings of parents' involvement behavior" (Walker et al., 2005, p. 89). The three constructs lead to the fourth construct of parent choice of involvement activities on level two (Hoover-Dempsey & Sandler, 2005). Although the data were not aggregated in the present study to this level, it was important to align the ten parenting scales to the conceptual model from which the instrument was derived. From the model, Hoover-Dempsey and Sandler (2005) developed a questionnaire of 58 items using the Likert-type response format. The 58 items on the questionnaire which correspond to the ten subscales of the parent involvement model were used to create parenting predictor variables which include: Parental Efficacy and Parental Role Construction (Valence and Role Activity Beliefs), General, Specific School, and Specific Child Invitations, Knowledge and Skills, Time and Energy, Home Involvement, and School Involvement (see Appendix B). Hoover-Dempsey and Sandler (2005) established satisfactory face and content validity for all scales contained within the questionnaire based upon rigorous evaluation by an expert panel of five members (see below for a discussion of the reliability analyses for the ten parenting subscales).

Table 2 *Alignment Between Parenting Subscales and Conceptual Model*

Subscales	1st Level Constructs	2nd Level Constructs
Valence	Parental Role Construction	Personal Motivation
Role Activity Beliefs	Parental Role Construction	Personal Motivation
Parent Efficacy	Personal Motivation	Personal Motivation
General School Invitations	Invitations	Invitations
Specific School Invitations	Invitations	Invitations
Specific Child Invitations	Invitations	Invitations
Knowledge and Skills	Life Context	Life Context
Time and Energy	Life Context	Life Context
Home Involvement	Parent Involvement Forms	Parent Involvement Forms
School Involvement	Parent Involvement Forms	Parent Involvement Forms

In Table 2, the parenting subscales are aligned with their corresponding constructs. Referencing Table 2, the following section defines and describes the organization and structure of the subscales within the construct. Valence and Role Activity Beliefs subscales have a two-level construct structure; the remaining eight subscales have the same structure for both levels.

Parental role construction is a construct "defined as parents' beliefs about what they should do in relation to the child's education" (Walker et al., 2005, p. 89). Valence scale assessed the parent's attitude or proclivity toward schools based upon his/her own personal experiences; Role Activity Beliefs scale assessed the parent's belief of whether to and to what extent to participate actively in his/her child's education (Walker et al., 2005). On the Role Activity Beliefs scales, both passivity and activity are assessed;

higher scores imply more active role beliefs. Valence toward school was assessed under parental role construction; when considered in combination with Role Activity Beliefs, a "theoretically reasonable definition of parental role construction for involvement" (Walker et al., 2005, p. 92) is useful in understanding a more comprehensive idea of parental role construction. Parental Efficacy is a construct defined as parents' beliefs in their ability to assist their children in reaching the children's goal (Walker et al., 2005). In this case, the goal was academic achievement. Parents who have a positive self-efficacy were more empowered to make contributions toward their children's goal of academic success.

General School, Specific School, and Specific Child Invitations were contained within the Invitations construct. General Invitations as a scale included back-to-school orientation night, open house, parent-teacher conferences, and any other events to which the entire school community was invited to support student learning and academic success (Hoover-Dempsey & Sandler, 1997). The Specific School Invitations scale encompassed teacher invitations which served to motivate some parents to become involved. Examples included homework assignments that incorporated the parents. Another example was standing invitations to parents to visit the classroom when they were available or to be guest speakers on a subject or topic the class was studying (Balli, Demo, &Wedman, 1998; Walker et al., 2005). Specific Child Invitations as a scale included specific requests for assistance from children to their parents in the areas of difficulty with homework and schoolwork in general. "Invitations to involvement from the child are influential because they express the child's need for and willingness to accept parental help" (Walker et al., 2005, p. 94).

Under the Life Context construct were Knowledge and Skills and Time and Energy. Parents' Knowledge and Skills as a separate scale impacted the type and degree of involvement in their children's education at home and school. In the Lareau (1989) study (as cited in Walker et al., 2005), less educated parents may have felt inadequate in terms of assisting their children with homework and also felt inadequate to ask the teachers how they can best help their children (Walker et al., 2005). Literacy and language may be considered as factors which affect the likelihood of parent involvement. Gettinger and Waters' (1998) study (as cited in Walker et al., 2005) identified that parents' time and energy can pose barriers to parental involvement, such as demanding jobs or other family demands. According to Balli et al. (1998), "several studies indicate that biological parents in two-parent households spend more time than other parents engaged with children in homework activities" (p. 149). Parent involvement can be impacted by family structure, employment flexibility, and adequate resources to meet family demands.

Home Involvement and School Involvement activities as separate scales were subsumed within the Parent Choice of Involvement Activities construct. The items on the questionnaire focused on the actual frequencies of parent involvement activities during the school year as oppose to asking how likely the parent may be to engage in a variety of activities. The list of activities ranged from talking to their child regarding school to participating in the PTA or field trips.

Reliability of subscales. In the Hoover-Dempsey and Sandler (2005) study, reliabilities ranged from .70 to .88 for the subscales represented by the 58 items (see Appendix D). In the present study's sample, the reliabilities ranged for the ten subscales

from .82 to .95 as measured by coefficient omega and from .73 to .95 as measured by coefficient alpha. All reliability analyses are conducted by subscale using SPSS and Jmetrik (Meyer, 2011). SPSS dropped parents from the analyses separately for each subscale if data were missing; in contrast, Jmetrik dropped parents from the analyses for all subscales if there was any missing data. As such, SPSS included from 128 to 145 parents in the analysis depending on the subscale, while Jmetrik included 122 parents in all reliability analyses (see Tables 3 and 4).

According to Graham (2006), many in the research community have become reliant upon coefficient alpha to estimate internal consistency, a measure of reliability. Graham presented three measurement models to assess reliability. Jmetrik software was used to fit three measurement models to each of the 10 subscales separately. The models were congeneric, tau-equivalent, and parallel. The parallel model assumed that the factor loadings and error variances were equal for all items. The tau-equivalent model assumed that the factor loadings were equal. It allowed each item to have its own error variance. The congeneric model assumed that each item had its own factor loading and its own error variance. The Jmetrik software allowed for the simultaneous presentation of results for the three models. Determining the best fitting model required careful and critical examination of two important and well-known fit statistics: goodness-of-fit index (GFI) and root mean square error of approximation (RMSEA). Results indicated that the congeneric model fit the data best for all ten constructs (see Table 3). A closer look at the fit statistics revealed that GFIs were mostly acceptable; three of the ten scales had GFIs considered acceptable; they were .90 or higher. Five of the ten scales were .88 or higher. Home Involvement (.8697) and Role Activity Beliefs (.8152) were slightly lower. The

RMSEA results were generally higher than the acceptable range of.05-.08; Home Involvement (.2383) was at the highest level, and School Involvement (.0968) was at the lowest level. Graham (2006) advocated for researchers to select fit statistics based on preference and appropriateness, and then to make an informed decision on the best fitting model. My decision was based on the selection of well-known and respected fit statistics of GFI and RMSEA as well as the belief of parsimony. The congeneric model was the least restrictive and parsimonious model. The lowest reliability coefficient was Time and Energy (.8196) which was acceptable; the remaining nine coefficients ranged from School Involvement (.8330) to Valence (.9543), which were very good results. It was important to make best-fit decisions based on the data. In light of GFI and the RMSEA, GFI is more in alignment with its standards of acceptability than RMSEA, but the overall pattern showed that the congeneric model was the best fit for the study. The reliability results suggested that the parents responded consistently to items within the subscales. However, the results of the reliability analysis showed inconsistencies regarding model-data fit, with one fit measure (i.e., GFI) showing evidence of good fit and the other fit measure (i.e., RMSEA) showing evidence of moderate to poor fit. The full results are presented in Table 3.

Table 3 *Reliability Results for Coefficient Omega, N=126 Students*

Parent Scale	Coefficient Omega	GFI	RMSEA
Valence	.9543	.9069	.1507
Specific Child Invitation	.9090	.8956	.2094
Role Activity Beliefs	.9062	.8152	.1344
Home Involvement	.8929	.8697	.2383
General School Invitation	.8914	.8823	.1758
Specific School Invitation	.8895	.8947	.2105
Knowledge and Skills	.8410	.9051	.1527
Parent Efficacy	.8339	.8858	.2208
School Involvement	.8330	.9646	.0968
Time and Energy	.8196	.8992	.2051

Note: GFI = goodness of fit; RMSEA = root mean square error approximation

Additionally, reliability was assessed using coefficient alpha, which is a standard measure used in the research community. As previously stated, SPSS dropped parents from the analysis separately for each subscale if data were missing. Therefore, the sample sizes varied by subscales, which is noted in Table 4 with the coefficient alpha results. The subscale with the lowest reliability coefficient was Parent Efficacy (.734), which was lower than the reliability coefficients for all the subscales under the congeneric model.

Table 4 *Reliability Results for Coefficient Alpha*

Parent Scale	Coefficient Alpha	Number of Items	Sample Size
Valence	.947	6	141
Specific Child Invitation	.867	5	145
Specific School Invitation	.851	5	143
Role Activity Beliefs	.832	10	143
General School Invitation	.828	6	128
Home Involvement	.825	5	143
School Involvement	.820	5	143
Knowledge and Skills	.811	6	142
Time and Energy	.804	5	142
Parent Efficacy	.734	5	143

Validity analysis of subscales (factor loadings). Each parenting variable is measuring a similar construct, parent involvement. To assess the validity evidence of the parenting variables, the Jmetrik software was used to perform a confirmatory factor analysis for each of the 10 subscales separately. The confirmatory factor analyses were fitted to each subscale separately. Thus, the results were consistent with the study's conceptual model which suggested that the conceptual model has construct validity (see Table 5). From a validity measurement perspective, factor loadings which are .4 or greater are considered acceptable. Survey item numbers 7 and 10 from the Parent Efficacy, number 28 from Roles Activity Beliefs, number 29 from Knowledge and Skills, and number 40 from Home Involvement were lower than the acceptable level of .40. The lowest factor loading was .2462 for item number 40. The factor loadings matched the constructs that the scales were intended to measure in accordance with the study's

conceptual model. In Table 5, the examination of the factor loadings gave support and justification to keep all ten subscales separate.

Table 5 *Results of Confirmatory Factor Analysis Models*

Item	Factor Loading	Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
Valence		**Parent Efficacy**		**Roles Activity Beliefs**		**General School Invitations**	
1	1.0728	7	0.2243	19	0.6829	12	0.9108
2	0.9941	8	1.0330	20	0.5698	13	0.8894
3	1.1204	9	1.3183	21	0.5400	50	0.7849
4	1.1601	10	0.3197	22	0.7919	51	0.7257
5	1.3092	11	1.1813	23	0.4696	52	0.9473
6	0.9628			24	0.5906	53	0.7665
				25	0.7824		
				26	0.7349		
				27	0.8526		
				28	0.3995		
Specific School Invitations		**Specific Child Invitations**		**Knowledge and Skills**		**Time and Energy**	
14	1.4696	54	0.9781	29	0.3079	30	0.6187
15	1.6268	55	1.3398	31	0.6509	32	0.5977
16	1.0491	56	1.0248	34	0.9562	33	0.5726
17	0.8403	57	1.3190	35	0.9344	37	0.8936
18	0.9321	58	1.1976	36	1.1741	39	0.9707
				38	0.7395		

Item	Factor Loading	Item	Factor Loading
Home Involvement		School Involvement	
40	0.2462	42	0.7926
41	1.0869	43	0.9878
44	1.0401	45	0.9569
47	1.4115	46	1.1526
48	1.5508	49	1.2313

Reading Achievement

The reading portion of the State Site of Research Comprehensive Assessments-Series II (SSRCA-II, State Site of Research Department of Education [SSRDE], 2010) is a paper and pencil standardized test given annually in April/May to State Site of Research public school students enrolled in third through eighth and tenth grades. Students read multiple passages of expository text and poetry, and they answer questions related to concepts and skills within three sub strands: (a) comprehension, (b) vocabulary expansion, and (c) literature, which are aligned with the State Site of Research Academic Standards and respective grade level benchmarks. Forty to 50 test questions are scored within each grade level; the questions are formatted as multiple choice and constructed response. The school district has flexibility in administering the four separate sections of the test over a series of days (SSRDE, 2009). The three sub strands are integrated into each of the four segments.

According to SSRDE (2009), reading passages are written according to grade level expectations of content, vocabulary and readability. The content is an appropriate measure of the strand, sub-strand, standard and benchmark, which were developed and approved by the state. More importantly, the subject matter is such that the widest audience possible should be able to comprehend the content. The passages have culturally sensitive content, have been field tested, and approved by the Content Committee and the Bias and Fairness Committee. The multiple choice questions have only one correct answer, and the constructed responses have been scored by a rubric based on guidelines that have been reviewed by the aforementioned committees.

English language arts, English as a second language, and special education licensed teachers in the state that was the research site served as reviewers of the testing items on the reading SSRCA-II tests. The teachers were diverse in terms of ethnicity, gender, and region they represent across the state. The teachers evaluated the testing items using an 11-point checklist. Sample questions from the checklist include: "Does the item have only one correct answer? Does the item measure what it is intended to measure? Is the cognitive level appropriate for the level of thinking skill required?" (SSRDE, 2009, p. 45).

SSRDE and SSRCA-II testing contractor constructed the annual tests with multiple test forms, which include testing items that were comparable in terms of difficulty or complexity. Educators served on field-tested data committees and made recommendations from a pool of testing items (SSRDE, 2009). The results of field-tested data review that met approval were deemed acceptable for use as testing items. According to SSRDE (2009), every test has items from each strand but not necessarily

each benchmark because to include all benchmarks would significantly increase the testing time and length. The testing contractor "uses operational and field test data to place the item difficulty parameters on a common item response theory scale" (SSRDE, 2009, p. 50). As a result of using the item response theory (IRT) scale, the testing contractor could make appropriate selections of testing items in terms of content, construction practices, and year-to-year maintenance of comparable levels of difficulty of the testing items. As students were tested year to year, there existed a testing system with built-in continuity from one grade level to the next level. There was a different test for each grade level each year.

The SSRDE provided reliabilities or alpha coefficients by race/ethnicity, gender within each grade level, and by each state benchmark. The total raw scores had reliabilities in the high .80s to mid .90s, which are considered good. The reliabilities were lower for each individual state benchmark from .48 to .87 (SSRDE, 2007). The total raw reliability scores ranged from .91 to .92 across all tested grade levels (SSRDE, 2011a).

Validity is defined as purpose specific. The purpose of this reading assessment was to measure student achievement. SSRCA-II tests were assessed for test validity based on four different approaches: (a) criterion, (b) content (c) construct, and (d) argument-based validity. All four approaches required the collection of evidence to support valid findings and inferences. There was insufficient evidence to support or determine strong criterion and construct validity. In terms of the SSRCA-II tests, criterion and construct have been assessed as weaker validity than content and argument-based validity (SSRDE, 2011b).

"Content validity is a type of test validity addressing whether the test adequately samples the relevant domain of material it purports to cover. If a test is made up of a series of tasks that form a representative sample of a particular domain of tasks, then the test is said to have good content validity" (SSRDE, 2011b, p. 151). The evaluation process of content validity is subjective; experts use rational arguments to determine the strength or weakness of content validity. SSRDE espouses that the due diligence exercised by SSRDE, test contractors and committees of educators demonstrated the extensive amount of work performed in collecting the necessary evidence to ensure that the SSRCA-IIs have good content validity (SSRDE, 2011b).

Finally, the argument-based approach to validity encompasses the *interpretative argument* which entails the process of assigning test scores and the interpretation of test scores based on Kane (2006) research (as cited in SSRDE, 2011b) . Validity is defined as purpose specific. The purpose is to measure student achievement. The scores in turn determine the reading achievement level of proficiency versus non proficiency of students meeting the State Academic Standards. The interpretative argument has four components upon which validity evidence is collected: (a) *scoring*, (b) *generalization*, (c) *extrapolation*, and (d) *implication*. The validity arguments for scoring and generalizability are quite strong (SSRDE, 2011b). The scoring validity arguments are strong based on appropriate scoring rules as a result of "the processes of range finding, rubric review, recruiting and training of scorers, quality control, appeals and security evidence" (SSRDE, 2011b, p. 155). Additional evidence resulted from inter-rater agreement and inter-rater reliabilities which are high generally for the State Site of Research assessments (SSRDE, 2011b). Finally, "item response theory (IRT) models

provide a basis for the State Site of Research assessments. IRT models are used for the selection of items to go on the test, the equating procedures and the scaling procedures" (SSRDE, 2011b, p. 155). Model fit and item fit are determinants in deciding whether an item is included or not included on the test. These above-mentioned fit items are examined carefully for validity. Additionally, item-total correlations are high in general on the State Site of Research assessments which indicate that "items on the test require this construct to be answered correctly" (SSRDE, 2011b, p. 156). The generalization validity arguments are strong based on content validity and random measurement error being controlled. There are committees of educators who work collaboratively with item-development experts, assessment experts and State Site of Research staff to review and conduct field tests on potential testing items based on the alignment between the testing items and the corresponding benchmarks (SSRDE, 2011b). "The nature and specificity of these review procedures provide strong evidence for the content validity of the test" (SSRDE, 2011b, 157). Random measurement error is controlled mostly from reliability. The State Site of Research assessments are shown to be reliable (SSRDE, 2011b). The extrapolation component has two sub components: (a) analytic evidence, and (b) empirical evidence. "Validity for extrapolation requires evidence that the universe score is applicable to the larger domain of interest" (SSRDE, 2011b, p. 158). The universe score is defined as a hypothetical score based on the assumption that students would receive the referenced score 'if the entire universe of test questions could be administered" (SSRDE, 2011b, p. 153).

It is virtually impossible to test all of the benchmarks on the SSRCA-IIs; some of the benchmarks are assessed in the classroom. The collection of analytic evidence entails

that the SSRCA-II needs to be powerful enough to make inferences from the test scores on any missing benchmarks. Criterion validity provides the empirical evidence for extrapolation purposes, but the SSRCA-IIs do not have an appropriate criterion identified. "The most promising empirical evidence would come from criterion validity studies with convergent evidence." (SSRDE, 2011b, p. 159).

Implication validity evidence is invalidated if the students, schools, and districts do not take the SSRCA-IIs seriously. The following actions serve as counter arguments to invalidation. The Graduation-Required Assessment for Diploma (GRAD rule) at the tenth grade level requires all tenth students to earn proficiency status on the SSRCA-II reading portion in order to graduate from high school. In addition, there are low percentages of students who leave blank responses on the SSRCA-IIs to written compositions and constructed-responses which indicate that the students at all grade levels are seriously applying themselves during the SSRCA-IIs. More importantly, students at all testing levels are made aware of the No Child Left Behind ramifications based on low performance to themselves, their schools and district.

In contrast to scoring and generalization, the validity arguments for extrapolation and implication are less strong. To strengthen the latter two arguments would entail identifying a suitable criterion for extrapolation and conducting more implication studies to support the inferences of the positive impact versus the negative consequences of SSRCA-IIs (SSRDE, 2011b). "In general, validity arguments based on rationale and logic are strongly supported for state assessments" (SSRDE, 2011b, p. 160). SSRDE equated forms within a grade level across years to be parallel. The SSRCA-II scores made

available by the Participating School District's Research, Evaluation and Assessment department for the study were the testing years 2009-2011.

Procedures

The procedures section provides information on the necessary steps taken to receive approval for the study from the University of SSR and the Participating School District Institutional Review Boards. After the necessary approvals were received, the Site of Research parent program was contacted to confirm the administrative needs and requirements for the mailing of the survey questionnaires. Participating School District's Research, Evaluation and Assessment department provided the identification numbers directly to the parent Connecting Parents to Educational Opportunities (CPEO) program to ensure the Participating School District's data privacy requirements were being followed.

In order to proceed with the data collection phase of the study, I needed to obtain approval from both the University of SSR and Participating School District Institutional Review Boards (IRBs). The approval documents were not included in the appendices in order to protect the anonymity of the school district. Approval dates were granted on March 24, 2011 from the University of SSR and February 28, 2012 from the Participating School District Institutional Review Boards. Upon receiving IRB approvals, I contacted the Participating School District CPEO program regarding the initial mailing to potential study participants. Pending approval of the study procedures, the CPEO Coordinator, offered, and I accepted that CPEO staff would process all mailings for my study. The coordinator confirmed that the PIPPQ survey questionnaire could be mailed with the information on the study. I provided the stamped envelopes with the appropriate study

content materials which consisted of the cover letter to the CPEO parents with the informed consent form and the PIPPQ. Pseudo study identification numbers were assigned to the parents to correspond with student identification numbers stored in the CPEO database. The pseudo student identification numbers were sequenced from 1 to 1,127 based on their CPEO enrollment year and ethnicity.

The CPEO staff printed the mailing labels, affixed the mailing labels, and mailed all envelopes in May 2012 and the follow up mailing in June 2012. I was in compliance with respect to honoring data privacy requirements.

The following items were sent to 1,127 parents:

- English, Spanish, or Hmong versions of the cover letter
- informed consent form to obtain demographic and achievement data from the Participating School District
- PIPPQ questionnaire in English or Spanish.

The informed consent and questionnaires were returned directly to me. The paper version of the study's questionnaire was completed by CPEO parents. In the cover letter, I expressed appreciation to the parents and emphasized the importance and potential benefits for completing the questionnaire in a timely manner. CPEO parents were informed that their input was extremely valuable to developing programs and policies that may potentially close the academic achievement gap in the Participating School District.

The data on the SSRCA-II reading scores were collected through the Participating School District, specifically the Research, Evaluation and Assessment (REA) department. Obtaining these scores was dependent upon consent from the parents when they returned

the PIPPQ survey. The testing performance scores were available based on the individual student and racial backgrounds. All the SSRCA-II (and demographic) data were collected from the participating district.

For the study, 1,127 parents were identified through the CPEO program and were mailed the survey in May 2012 and a follow-up survey in June 2012. The 1,127 parents completed the CPEO program between the years of 2008 through 2010. These parents had children from kindergarten through twelfth grade in the participating school district during the aforementioned time period. Out of 1,127 surveys mailed to CPEO parents, 145 in total were returned; 122 surveys were returned with completed information and active consent. The response rate was 11% overall at the end of the survey period. The following factors were thought to account for the low response rate: a) survey length, b) narrow window of time to respond, and c) the time of year the survey was administered.

Table 6 *Survey Response Rate Summary*

Sample	**Total Surveys Received with Complete data**	**Total Surveys Received with Missing Data**	**Total Surveys Received**
Parents	122	23	145
Associated Students	126	58	184

Note: Sent = 1, 127, Returned = 145.

The number of students in the sample was 184 based on the 122 parents who completed the survey with active consent. Missing reading achievement and survey data reduced the student sample by 58, which resulted in a final sample size of 126 students

(see below for missing data analyses). In Table 7, the parenting variables come from the ten scales of the survey.

Table 7 *Missing Data Summary for Students (N=184)*

Parent Level Variables	**Complete Sample**	**Missing Sample**	**Associated Parent Sample**
General School Invitations	184	0	145
Home Involvement	182	2	144
Knowledge and Skills	184	0	145
Parent Efficacy	184	0	145
Role Activity Beliefs	182	2	143
School Involvement	182	2	144
Specific Child Invitations	184	0	145
Specific School Invitations	182	2	143
Time and Energy	182	2	144
Valence	179	5	141
Student Variable Level	**Complete Sample**	**Missing Sample**	
Ethnicity	184	0	
Gender	184	0	
Free/Reduced Lunch	178	6	
Language	184	0	
Grade	132	52	
SSRCA-II	132	52	
Valid Student Sample	126	58	

Missing Data

Prior to conducting the logistic regression analysis, accounting for missing data and conducting analyses of missing data were deemed important and necessary initial analysis steps in the study. There were 52 students whose parents returned surveys without active consent, which meant these 52 students were removed from the data. I had indirect access to the participants unless they contacted me for clarification; a limitation of the study was my inability to follow up with the participants and discuss whether they intended not to give active consent. This lack of consent may have been due to oversight, uncertainty or other unknowns; parents may have not given consent because they did not understand the request. An additional six students were missing data on one or more parenting variables. The missing variables were: (a) Valence, (b) Role Activity Beliefs, (c) Specific School Invitations, (d) Time and Energy, (e) Home Involvement, and (f) School Involvement.

Because 58 out of 184 student cases had missing data or were excluded from analysis by lack of parent consent, a series of χ^2 and *t*-tests were performed with the purpose of looking for differences between descriptive data for the 126 students who provided complete data and the 52 students who had missing data either because their parents did not provide active consent and complete survey data or, for 6 additional students, because their parents did not complete all survey items. The χ^{2-}tests and the *t*-tests assessed whether the frequencies (categorical variables) or means (continuous variables) of the two groups (non missing data versus missing data) were statistically different from each other on the following variables:

- SSRCA-II reading proficiency status,

- race/ethnicity,
- gender,
- free or reduced price lunch status,
- language spoken in the home, and
- 10 parenting variables
    1. General School Invitations,
    2. Home Involvement,
    3. Knowledge and Skills,
    4. Parent Efficacy,
    5. Role Activity Beliefs,
    6. School Involvement,
    7. Specific Child Invitations,
    8. Specific School Invitations,
    9. Time and Energy, and
    10. Valence.

The 10 parenting variables from the parent survey were derived from and are in alignment with the conceptual model.

To control for the compounding of Type I error rates, the alpha level was calculated by dividing .05 by 15, which reflects the total number of $\chi^2$and *t*-tests; therefore the new alpha value for the missing data analysis was .003.

Table 8 Missing Parent Data Summary for SSRCA-II Student Reading Proficiency Status

	Missing Category			
Proficiency	**Non-missing data group**		**Missing data group**	
Status	***n***	***%***	***n***	***%***
Non Proficiency	46	37.0	3	50.0
Proficiency	80	63.0	3	50.0
Total	126	100.0	6	100.0

As shown in Table 8, within the missing data group, the proficiency status distribution was 50% proficiency and 50% non proficiency. Within the non-missing data group, the proficiency status distribution was 63% proficiency and 37% non proficiency. The results indicated no relationship between students' reading proficiency status and the missing data variable status, $X^2(1) = 0.45$, $p = .504$.

Table 9 *Missing Data Summary for Ethnicity*

	Missing Category			
	Non-missing data group		Missing data group	
Ethnicity	***n***	***%***	***n***	***%***
African-American	31	25.0	16	28.0
Asian	9	7.0	3	5.0
Caucasian	67	53.0	13	22.0
Hispanic	15	12.0	20	35.0
Native American	4	3.0	6	10.0
Total	126	100.0	58	100.0

As shown in Table 9, within the missing data group the ethnicity distribution was 35% Hispanic, 28% African-American, 22% Caucasian, 10% Native American, and 5% Asian students. Within the non-missing data group the ethnicity distribution was 53% Caucasians, 25% African-Americans, 12% Hispanics, 7% Asians, and 3% Native Americans. Proportionately Asian and Native American students had less missing data than Hispanic, African-American, and Caucasian students. The results indicated that there was a statistically significant relationship between whether a student had missing data and ethnicity, $X^2(4) = 23.42$, $p < .001$, using an alpha value for the missing data analysis of $p < .003$.

Table 10 *Missing Data Summary for Gender*

	Missing Category			
	Non-missing data group		Missing data group	
Gender	***n***	***%***	***n***	***%***
Male	73	58.0	29	50.0
Female	53	42.0	29	50.0
Total	126	100.0	58	100.0

As shown in Table 10, within the missing data group, the gender distribution was 50% males and 50% females. Within the non-missing data group, the gender distribution was 58% males and 42% females. The results indicated no relationship between gender and the missing data variable status, $X^2(1) = 1.01$, $p = .314$.

Table 11 *Missing Data Summary for Lunch Status*

	Missing Category			
	Non-missing data group		Missing data group	
Lunch Status	***n***	***%***	***n***	***%***
Free	59	47.0	26	50.0
Reduced Price	9	7.0	11	21.0
Full Pay	58	46.0	15	29.0
Total	126	100.0	52	100.0

As shown in Table 11, within the missing data group, the lunch status distribution was 50% free, 21% reduced price, and 29% full pay. Within the non-missing data group, the lunch status distribution was 47% free, 7% reduced price, and 46% full pay. The results indicated that there was not a statistically significant relationship between whether a student had missing data and student's lunch status, $X^2(2) = 9.16$, $p = .010$, using an alpha value for the missing data analysis of $p < .003$.

Table 12 *Missing Data Summary for Language*

	Missing Category			
	Non-missing data group		**Missing data group**	
Language	***n***	***%***	***n***	***%***
English	101	80.0	33	57.0
Hmong	9	7.0	3	5.0
Native American	3	2.0	5	9.0
Somali	2	2.0	0	0.0
Spanish	11	9.0	17	29.0
Total	126	100.0	58	100.0

As shown in Table 12, within the missing data group, the language variable distribution was 57% English, 29% Spanish, 9% Native American, 5% Hmong, and 0% Somali. Within the non-missing data group, the language variable distribution was 80% English, 9% Spanish, 7% Hmong, 2% Native American and 2% Somali. The results

indicated that there was a statistically significant relationship between whether a student had missing data and student's native speaking language, $X^2(4) = 18.72$, $p = .001$, using an alpha value for the missing data analysis of $p < .003$.

Table 13 *Missing Data Summary for Parenting Variables*

	Missing Category								
	Non-missing data group			**Missing data group**					
Parenting Variable	***n***	***M***	***SD***	***n***	***M***	***SD***	***t***	***df***	***p*-value**
General School Invitations	126	4.90	0.84	58	5.16	0.77	-1.95	182	.053
Home Involvement	126	3.97	1.16	56	4.97	0.93	-6.25	129.92	<.001*
Knowledge and Skills	126	4.58	0.77	58	4.98	0.86	-3.14	182	.002*
Parental Efficacy	126	2.27	0.87	58	2.21	0.94	.46	182	.644
Role Activity Beliefs	126	4.82	0.55	56	5.26	0.58	-4.91	180	<.001*
School Involvement	126	2.66	1.10	56	3.30	1.22	-3.49	180	.001*
Specific Child Invitations	126	2.68	1.14	58	3.74	1.28	-5.62	182	<.001*
Specific School Invitations	126	2.24	0.97	56	3.53	1.36	-6.37	80.56	<.001*
Time and Energy	126	4.43	0.90	56	4.90	0.83	-3.27	180	.001*
Valence	126	4.72	1.13	53	4.83	1.22	-.58	177	.560

Note: Higher means indicate higher levels of the respective parenting behavior.

Ten *t*-tests were performed on the parenting variables (see Table 13). The first step was to use Levene's test for equality of variances. The variances were significantly different for Specific School Invitations and Home Involvement. Therefore, the equal variances not assumed option was used for those two variables, and the analyses indicated that for the other eight variables the variances were equal.

Results comparing mean scores were nonsignificant for Parent Efficacy, Valence, and General School Invitations. For example, on the results for Parent Efficacy the mean score was 2.27 (*SD* = 0.87) for the non-missing data group and 2.21 (*SD* = 0.94) for the missing data group, $t(182) = 0.46$, $p = .644$. The remaining seven parenting variables' results were statistically significant between the missing and non-missing data categories. The variables were Knowledge and Skills, Time and Energy, School Involvement, Roles Activity Beliefs, Specific School and Specific Child Invitations, and Home Involvement. For example, on Knowledge and Skills the mean score was 4.58 (*SD* = 0.77) for the non-missing data group and 4.98 (*SD* = 0.86) for the missing data group, $t(182) = 3.14$, $p = .002$. Within the missing data group, the highest mean scores were 5.26 and 5.16 for Role Activity Beliefs and General School Invitations, respectively. Within the non-missing data group, the highest mean scores were 4.90 and 4.82 for General School Invitations and Role Activity Beliefs, respectively. The missing data group had higher mean scores on these parenting scales compared to the non-missing data group.

Table 14 *Results of Missing Data Analyses*

Variable	t/χ^2	***df***	***p*-value**
Ethnicity	23.42	4	<.001*
Gender	1.01	1	.314
FRL	9.16	2	.010
Language	18.72	4	.001*
General School Invitations	-1.95	182	.053
Home Involvement	-6.25	129.92	<.001*
Knowledge and Skills	-3.14	182	.002*
Parental Efficacy	.46	182	.644
Role Activity Beliefs	-4.91	180	<.001*
School Involvement	-3.49	180	.001*
Specific Child Invitations	-5.62	182	<.001*
Specific School Invitations	-6.37	80.56	<.001*
Time and Energy	-3.27	180	.001*
Valence	-.58	177	.560

*Significant using an alpha value for the missing data analysis of $p < .003$.

Table 14 adds the categorical variables that require a chi squared test. The above described results were summarized in Table 14. As a result of missing data, descriptive data for my final population changed to proportionately more Caucasian and English-language speaking. The implication is that the final population was different than the original target population with regard to ethnicity and language. Analysis of the missing data for the continuous Parenting variables showed that the seven significant parent variables had higher mean scores on the aforementioned variables (*t*-tests). Again, the missing data group had higher mean scores on these parenting scales compared to the non-missing data group.

Data Analysis

The data analysis section has two subsections; they are variables and analysis. First, the predictor, dependent and control variables are defined and described under

variables. Second, SPSS was used to produce the results of basic descriptive statistics and inferential statistics. A discussion of logistic regression is included to explain the reasoning and justification for employing it as the statistical tool for the study under analysis.

Variables

The present study has predictor, dependent and control variables. All variables can be classified according to their level of measurement; the variable's scale determines the level of measurement, which is defined by how the variable is operationalized. Three scales are relevant for discussion purposes in the present study. In the following section, each variable is defined by its corresponding level of measurement: (a) nominal/categorical, (b) ordinal, and (c) interval.

Predictor variables.

The predictor variable for racial backgrounds was dummy coded into four dichotomous variables. In the study, the nominal scale consists of the following categories of racial backgrounds: African-American, Asian, Hispanic, Native American and Caucasian, which is the reference group. Parent involvement comprised a set of predictor variables corresponding to ten scales: (a) General School Invitations, (b) Home Involvement (c) Knowledge and Skills, (d) Parental Efficacy, (e) Role Activity Beliefs, (f) School Involvement, (g) Specific Child Invitations, (h) Specific School Invitations, (i) Time and Energy, and (j) Valence (Hoover-Dempsey & Sandler, 2005). The response scale values for each survey item ranged from one to six. The variables were constructed by calculating average scores across response items per scale. As such, the parent involvement variables for each of the 10 subscales may be treated as interval because the

differences in the width between response categories were likely to wash out when aggregating items. Three of the 58 items in the study's questionnaire were negatively worded (i.e., higher means were associated with lower levels of parenting behavior). All three of these items fell on the Parent Efficacy scale. Reverse coding (i.e., higher means coded to reflect higher levels of parenting behavior) was applied and remained consistent with the reversals going forward.

Dependent variable.

The dependent variable was student academic achievement, and it was defined as student test performance on the SSRCA-II reading portion. It was a categorical variable. Ideally, the SSRCA-II reading scale scores would have been used as the dependent variable in the present analysis. However, the SSRCA-II was scaled in such a way that the value of the scale scores reflected a student's grade level and their achievement level. As such, because in the present sample students were in different grades, the scale scores did not reflect achievement differences alone. So the percentile scale was considered as an alternative. However, as will be shown in presentation of Results in Chapter 4, the percentile scale distribution displayed severe non-normality and evidence of bimodality. As such, the decision was made to classify each student as proficient or not proficient based their SSRCA-II reading score following the state's proficiency guidelines. Students who scored above the 25^{th} percentile within their grade level were classified as proficient; students who scored at or below the 25^{th} percentile within their grade level were classified as non-proficient.

Control variable.

Social economic status (SES) was used as a control variable, and it was categorical. It is operationalized by the free and reduced priced lunch (FRL) status of each student, which is based upon family income. According to Masten (2013), families were qualified for free lunches at 130% above the federal poverty level. For example, a single parent with one child or a household size of two which earned $27, 991 annually qualified for free lunch status according to the income eligibility guidelines for 2012-2013 school term (Participating School District, 2012c). Free and reduced priced lunch status (FRL) as a measure of SES was selected because of its non-intrusive nature. Many times, participants are reluctant to share income information, and the study's response rate could have been negatively impacted. The justification for including SES as a control variable in the model was that SES and race are confounding variables. They were correlated, and the close association of the two variables is supported in the research literature. In reading the literature, it was asserted that knowing someone's race may imply or infer information about his/her SES when analyzing data for academic achievement (Alexander, Entwisle, & Horsey, 1997; Brooks-Gunn, Guang, & Furstenberg, 1993). Ethnicity and SES are confounded. Treating SES as a control variable partials out the effects of SES, which allows for an examination of the unique effects of ethnicity on student achievement. However, logistic regression assumes predictors are uncorrelated, which is a limitation of the study because including correlated variables (i.e., SES and ethnicity) can potentially produce multicollinearity in the model.

Analysis

After the data were collected from the parents and REA, they were entered into the Statistical Package for the Social Sciences (SPSS) software program, version 18. Basic descriptive analysis was performed to determine frequency distributions, no errors in data entry, address missing data, calculate means, ranges, standard deviations, and plot histograms. This was done in part to understand the data through descriptive analysis. The unit of analysis is the student, and the sampling unit is the student because the parent responses are matched to the student's SSRCA-II scores. Some parents have more than one child in the survey; their responses appear more than once. There was concern regarding the sample size and the need to maintain as many students as possible in order to maximize the sample size. The predictor variables were a mixture of categorical and continuous variables; the dependent variable was categorical; therefore logistic regression was used for the present study's analysis (Burns & Burns, 2008). Logistic regression has two main functions. First, logistic regression predicts group membership, in this case, whether the student is identified as proficient or not proficient on the SSRCA-II reading test. Logistic regression calculates the probability of success over failure (i.e., proficiency over non-proficiency); the results are reported as logits and odds ratios. Second, logistic regression provides information about the relationships between the variables (Burns & Burns, 2008). Because the dependent variable was not normally distributed, I performed a transformation, and the performed transformation was the natural log or logarithmic transformation. The natural log transformed values are called logits and became the new dependent variable in the regression equation. However, logits cannot be interpreted as they are, so I reversed the transformation after the regression was done. The reverse

transformation was called the exponential transformation. All of the final coefficients were transformed into odds ratios. Interpretation of regression coefficients was such that the value of the coefficient represented the amount of change in the dependent variable given a one-unit change in the respective predictor variable. In logistic regression, the dependent variable functions as log odds or logits; in the present study, the student's achievement level was classified into one of the following proficient status categories based on the SSRCA-II reading tests: proficient or not proficient.

Descriptive analysis was included; descriptive results of the 10 parenting variables were evaluated according to minimum and maximum values, means, and standard deviations. Model assumptions were tested for two major assumptions of logistic regression. One major assumption tested in logistic regression was that the predictor variables were linearly related to the natural log of the dependent variable; this was done using histograms and scatter plots. Multicollinearity was the second assumption tested using correlations between FRL and ethnicity, FRL and each parenting variable, and finally ethnicity and each parenting variable.

Inferential analyses were performed. The first step was to evaluate the null model to find the odds of proficiency versus the odds of non-proficiency before considering predictors. Overall model significance was assessed; the -2 log-likelihood (-2LL), chi squared, degrees of freedom, and associated *p*-value assessed the overall model significance (See Table 22). "The -2LL estimate the likelihood that the observed values of the dependent variable may be predicted from the observed values of the independent variables" (Anderson, n.d., p. 4). Ten output files were created, each corresponding to a different parenting variable. Each output file had output for two models. Each model had

output for three blocks (0, 1, and 2). Model 1 had ethnicity and SES in Block 1, and parenting was added in Block 2. In contrast, Model 2 had parenting and SES in Block 1, and ethnicity was added in Block 2. The null block is Block 0 in which the proficiency odds are calculated without variables in the model. Blocks 0 and 2 provided the same results in both models. Within the blocks, all relevant variables were entered simultaneously.

Independent Variables	Model 1			Model 2		
	Block 0	Block 1	Block 2	Block 0	Block 1	Block 2
10 Parenting Variables			X		X	X
Ethnicity		X	X			X
SES		X	X		X	X

Figure 1. Diagram of Logistic Regression Models

The -2LL, chi squared, and the corresponding *p*-value assessed both goodness-of-fit and the contributions of parenting and ethnicity in Block 2 (See Table 22). Statistics used to assess model fit or goodness-of-fit were Hosmer and Lemeshow chi squared and Nagelkerke R square (see Tables 21 and 22). The Hosmer and Lemeshow test was preferred when measuring goodness-of-fit. The chi squared tests were influenced by increases in sample size. The desire was for the *p*-value to be not significant, which would indicate that the model predicted values were not statistically significantly different from the observed values. The Nagelkerke R square was displayed in Table 22, which ranged in values between zero and one. The closer the Nagelkerke R square value was to one, the better the model fit was.

In Table 23, percentages were used to show how well the full model correctly classified students on the proficiency status dependent variable. In Table 23, the proportion of cases was classified correctly according to 3 groups: non proficiency,

proficiency, and overall total (Burns & Burns, 2008). The percentages were calculated by comparing the observed values of the dependent variable to the predicted values, and the extent to which the observed and predicted values agreed. In Table 23, the 10 parenting variables are displayed in rows, proficiency status variable values and overall percentages are displayed in columns. The aforementioned table and procedures were repeated for Block 1 Model 1 and Model 2.

Logistic regression output from SPSS provided the data for purposes of analysis and interpretation of the results. Logistic regression was performed 10 times following the blocking scheme previously described. To control for the compounding of Type I error rates the alpha level was calculated by dividing .05 by 10, which reflects the total number of parenting variables; therefore the new alpha value for the missing data logistic regression analysis was .005.

The following information is displayed in Tables 24 through 33: (a) the logit or the logistic coefficient (*b*) associated with the intercept and predictor variables, (b) standard error of the logit, (c) chi squared statistic, (d) degrees of freedom, (e) *p*-value, and (f) the change in the odds ratio attributed to the variable (Starkweather & Herrington, 2011). In Tables 24 through 33, odds ratios were shown in the form of Exp(*b*) and used to predict the odds of being proficient rather than the odds of not being proficient. The Wald statistic and associated *p*-value assessed or tested the significance of each of the predictor variables while controlling for the other variables in the model, and evaluated whether or not the regression coefficients were different than zero (Anderson, n.d.; Starkweather & Herrington, 2011). Logistic regression output provided the individual contribution of each predictor variable to the dependent variable in the form of Exp(*b*). It represented the

unique contribution of the predictor variables on the dependent variable when controlling for the effects of other variables. Exp(*b*) odds ratios were effect sizes. Regression analyses required the transformation of categorical variables into a set of dichotomous variables; as such, the predictor variables of racial background and SES were dichotomously coded as zero or one (Gay, Mills, & Airasian, 2009). Dummy coding was appropriate for regression analyses (Gay, Mills, & Airasian, 2009). SES was aggregated from 3 levels to 2 levels based on information that the district classified students' eligibility to full pay or free lunch status. The reduced lunch category was collapsed into the free category (S. Smith, personal communication, May 23, 2013).

Summary

In chapter 3, the purpose and research question were revisited. The post positivism epistemology was defined as providing the philosophical foundation to the study. Furthermore, a discussion of the distinction between epistemology and methodology was provided. The correlational cross-sectional research design was presented as a means to determine whether, and to what extent, a relationship exists between the predictor variables (parent involvement scales and ethnicity) and the dependent variable (reading achievement).

The sample and target populations were defined and described followed by the measures section. The instruments section focused on parent involvement and the reading achievement measures. The PIPPQ and its constructs were discussed in detail as well as the alignment of the conceptual model to the ten subscales. The reliability and validity of subscales analyses were presented and discussed. The reliability of subscales were

measured using coefficient omega and coefficient alpha. The subscales for validity were measured using confirmatory factor analyses. In the reading achievement section, the processes and procedures were presented on the development of the SSRCA-II testing items which included the state's reliability and validity analyses. The testing items were aligned with the State Site of Research academic standards and respective grade level benchmarks.

Procedures to obtain the necessary IRB approvals and the data collection procedures with the district's parent program were discussed. The missing data analysis showed results of a different target population than the original sample population for the study. The target population was proportionately more Caucasian and English speaking students. Finally, the data analysis section defined and described the variables used in the study and the logistic regression analysis used to cumulatively answer the research question. The results from logistic regression are provided in Chapter 4.

Chapter 4: Results

The research problem of the present study was to investigate the relative strength of parent involvement versus ethnicity in explaining the academic achievement gap between Caucasian, African-American, Native American, Asian, and Hispanic students as measured by the reading portion of the SSRCA-II assessment. The purpose of the study is to eventually lead to school policies and programs which empower urban parents, teachers and stakeholders to maximize the efficacy of parent involvement (Jeynes, 2007). Contained within this chapter are descriptive statistics, analyses of model assumptions, and the inferential results of the study. These results were used cumulatively to answer the research question: What is the relative strength of parent involvement versus ethnicity in predicting student achievement?

Descriptive Statistics

The construct of parent involvement was operationalized by the 10 subscales. The means were calculated across survey items to create the subscales which were identified as parenting variables. The School involvement, Home Involvement, Specific School and Specific Child Invitations subscales measured participation frequency; the remaining six subscales measure degrees of agreement and disagreement. In Table 15, descriptive results of the 10 parenting variables are presented, including: means, standard deviations, and minimum and maximum values. An examination of the parenting variables showed that the General School Invitations scale has the highest mean (4.90), followed by Role Activity Beliefs (4.82), Parental Efficacy (4.73), Valence (4.72), Knowledge and Skills (4.57), and Time and Energy (4.43). A gap of approximately half of a point separated the next closest mean, which was Home Involvement (3.97), followed by Specific Child

Invitations (2.68), School Involvement (2.66), and Specific School Invitations (2.24). Home Involvement had the highest standard deviation, followed by Specific Child Invitations, Valence, and School Involvement. All four of these standard deviations were greater than 1.00. The next five standard deviations ranged from 0.76 to 0.96; they were Knowledge and Skills, General School Invitations, Parental Efficacy, Time and Energy, and Specific School Invitations. The lowest standard deviation was approximately 0.50 for Role Activity Beliefs. Valence, Role Activity Beliefs, and Parental Efficacy were collectively subsumed under the personal motivation main scale of the conceptual model. After General School Invitations, they had the next level of highest means which indicated that the parents had positive feelings towards school based on their personal experience; they believed that parents should be involved in their children's education, and the parents feel empowered to support their children's academic achievement. In contrast, Specific School Invitations, Specific Child Invitations and School Involvement had the lowest means and high variability. This may have indicated that parents agree that they are more likely to receive General School Invitations, but they are less likely to participate from Specific School and Specific Child Invitations as reflected in a lower level of participation in School Involvement. A closer examination of the findings suggested that the parents agreed that they had the necessary Knowledge and Skills, Time and Energy which corresponded accordingly with the Home Involvement at moderate frequency levels.

Table 15 *Descriptive Statistics for Parenting Variables, N=126 Students*

Parenting Variable	*Min*	*Max*	*M*	*SD*
General School Invitations *	1.50	6.00	4.90	0.84
Role Activity Beliefs *	3.10	6.00	4.82	0.55
Parental Efficacy *	3.00	6.00	4.73	0.87
Valence *	2.00	6.00	4.72	1.13
Knowledge and Skills *	2.00	6.00	4.58	0.77
Time and Energy *	1.60	6.00	4.43	0.90
Home Involvement [x]	1.80	6.00	3.97	1.16
Specific Child Invitations [x]	1.00	6.00	2.68	1.14
School Involvement [x]	1.00	6.00	2.66	1.10
Specific School Invitations [x]	1.00	5.60	2.24	0.97

Note**: ***Responses on the agreement scales are 1=disagree very strongly, 2=disagree, 3=disagree just a little, 4=agree just a little, 5=agree, 6=agree very strongly; the subscale asks for agreement/disagreement responses;
[x] responses on the frequency scales 1=never, 2=1 or 2 times this year, 3=3-5 times this year, 4=once a week, 5=a few times a week 6= daily; the subscale asks for frequency responses.

Because different tests were administered to different grade levels and because scores were scaled to reflect grade level, percentile scores served as the dependent variable. However, the distribution of percentile scores showed a severe case of bimodality, the data were shown as two distinct groups (see Figure 2). Therefore, the decision was made to aggregate the percentile scores into two groups representing proficient and non-proficient students, using the achievement levels associated with the percentile scores. There are four achievement levels assigned to or associated with the SSRCA-II tests: (a) does not meet proficiency standard or status, (b) partially meets

proficiency, (c) meets proficiency, and (d) exceeds proficiency (SSRDE, 2009). As such, the *does not meet proficiency* (*n* = 22) and *partially meets proficiency* (*n* = 24) levels were collapsed into the non-proficient group (*n* = 46), and the *meets proficiency* (*n* = 33) and *exceeds proficiency* (*n* = 47) levels were collapsed into the proficient group (*n* = 80). This final variable representing two groups (i.e., proficient and non-proficient students) served as the dependent variable.

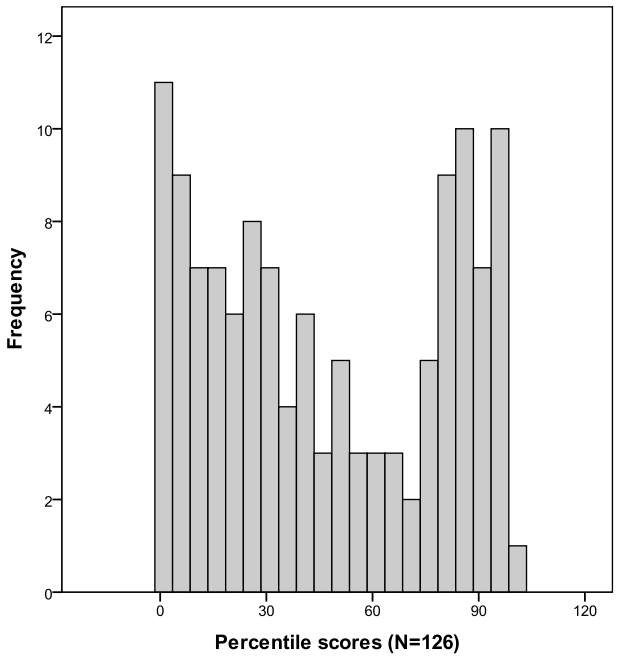

Figure 2. Frequency distribution of reading achievement percentile scores

Descriptive information (see Tables 16-19) was generated for varying combinations of FRL, ethnicity, proficiency status, and grade levels to understand the influences that each of the variables had in the analysis. In Table 16, fifty-four percent of the sample met the criteria for free and reduced price lunch and 46% for full-pay lunch. African-American and Hispanic students comprised 38% and 19% of the students eligible

for free or reduced lunch, respectively, while Caucasian and Asian students had lower frequencies of students eligible for free or reduced lunch with percentages of 24% and 13%, respectively. Finally, for Native American students 6% were eligible for free or reduced lunch. For full-pay lunch, there was 0% eligibility for Native American and Asian students, 3% for Hispanic, 9% for African-American, and 88% for Caucasian students. The results of a chi squared test between ethnicity and FRL showed that these variables were significantly related, $\chi^2(4) = 53.11$, $p < .001$.

Table 16 *Cross Tabulation of Student Ethnicity by Lunch Status*

		Lunch Status		
Ethnicity		**Free/Reduced**	**Full Pay**	**Total**
African-American	*n*	26	5	31
	% within ethnicity	84.0	16.0	100.0
	% within lunch	38.0	9.0	25.0
Asian	*n*	9	0	9
	% within ethnicity	100.0	0.0	100.0
	% within lunch	13.0	0.0	7.0
Caucasian	*n*	16	51	67
	% within ethnicity	24.0	76.0	100.0
	% within lunch	24.0	88.0	53.0
Hispanic	*n*	13	2	15
	% within ethnicity	87.0	13.0	100.0
	% within lunch	19.0	3.0	12.0
Native American	*n*	4	0	4
	% within ethnicity	100.0	0.0	100.0
	% within lunch	6.0	0.0	3.0
Total	*n*	68	58	126
	%	100.0	100.0	100.0

In Table 17, the distribution of ethnicity within the proficient group of students without controlling for SES was 85% Caucasian, 67% Asian, 35% African-American, 33% Hispanic, and 25% Native American. The distribution of ethnicity with the non proficient group of students without controlling for SES was 75% Native American, 67% Hispanic, 65% African-American, 33% Asian, , and 15% Caucasian. The distribution of proficient students was widely different between students of color and Caucasian students except Asian students.

Table 17 *Cross Tabulation of Student Proficiency Status by Ethnicity*

Proficiency status		Ethnicity					
		African-American	**Asian**	**Caucasian**	**Hispanic**	**Native American**	**Total**
Not Proficient	*n*	20	3	10	10	3	46
	% within proficiency	44.0	6.0	22.00	22.0	6.0	100.0
	% within ethnicity	65.0	33.0	15.0	67.0	75.0	36.0
Proficient	*n*	11	6	57	5	1	80
	% within proficiency	14.0	8.0	71.0	6.0	1.0	100.0
	% within ethnicity	35.0	67.0	85.0	33.0	25.0	64.0
Total	*n*	31	9	67	15	4	126
	%	100.0	100.0	100.0	100.0	100.0	100.0

As shown in Table 18, within the overall sample, 80 out of 126 students, 64% were proficient. Sixty-nine percent of the proficient students were identified as having full-pay lunch status, and thirty-one percent of the proficient students were free-and reduced-priced lunch students. Ninety-five percent of full-pay students were proficient, and five percent of the full-pay students were non proficient. Thirty-seven percent of free-and-reduced priced lunch students were proficient, and sixty-three percent of free-and-and-reduced priced students were not proficient. As mentioned previously, free-and-reduced price lunch status was collapsed into one group.

Table 18 *Cross Tabulation of Student Lunch Status by Proficiency Status*

		Proficiency Status		
Lunch Status		**Not proficient**	**Proficient**	**Total**
Full Pay	*n*	3	55	58
	% within Lunch	5.0	95.0	100.0
	% within Proficiency	7.0	69.0	46.0
Free/Reduced Pay	*n*	43	25	68
	% within Lunch	63.0	37.0	100.0
	% within Proficiency	93.0	31.0	54.0
Total	*N*	46	80	126
	% within Lunch	36.0	64.0	100.0
	% within Proficiency	100.0	100.0	100.0

For the present study, school type was defined as Elementary, including--grades 3-5, Middle, including--grades 6-8, and High, including--grade 10. As shown in Table 19, the overall reading proficiency was 64%. The lowest proficiency status came from the Middle school where 49% of the students were proficient, compared to 67% of the Elementary level students. At the High school level, 76% of the students were proficient.

Table 19 *Cross Tabulation of School Type by Proficiency Status*

School Type		Proficiency Status: Not Proficient	Proficiency Status: Proficient	Total
Elementary	*n*	9	18	27
	% within School Type	33.0	67.0	100.0
	% within Proficiency Status	20.0	22.0	21.0
Middle	*n*	25	24	49
	% within School Type	51.0	49.0	100.0
	% within Proficiency Status	54.0	30.0	39.0
High	*n*	12	38	50
	% within School Type	24.0	76.0	100.0
	% within Proficiency Status	26.0	48.0	40.0
Total	*n*	46	80	126
	% within School Type	36.0	64.0	100.0
	% within Proficiency Status	100.0	100.0	100.0

Model Assumption Checking

The major assumptions to be tested in logistic regression are that the predictor variables are linearly related to the natural log of the dependent variable, that the natural log of the dependent variable is normally distributed, and that the predictor variables are uncorrelated. To determine whether linearity and normality were present in the model, logit residuals were created and used to make ten simple scatter plots (see Appendix E) and ten histograms (see Appendix E). In each scatter plot, the x-axis represents the parenting variable, and the y-axis represents the logit residuals. In all ten scatter plots, no major violations of linearity were present, which suggests the assumption of linearity was sufficiently met. To assess normality, histograms were created by placing the logit residuals on the x-axis and frequency on the y-axis (see Appendix E). In all ten

histograms, three extreme data points were shown, which slightly skewed the distributions negatively. After further investigation, the students were Caucasian males, on full pay lunches, and low proficiency. The decision was made to retain these students because there was no evidence to suggest they belong to a different population from the rest of the sample and because the final results did not change when the analyses were run without these three students.

Another assumption of logistic regression is multicollinearity. Multicollinearity occurs when there are high correlations between the predictor variables. When multicollinearity occurs, the regression equation does little to predict the dependent variable. In the present study, multicollinearity may pose data analysis concerns for the following combinations of variables: (a) FRL and ethnicity, (b) FRL and each parenting variable, and (c) ethnicity and each parenting variable. The type of correlations showing in Table 20 is Pearson, which is appropriate because these data are interval. Correlations that include one dichotomous variable and one continuous are known as point-biserial correlations which are mathematically equivalent to Pearson correlations. Multicollinearity is a major limitation of the analysis when variables are highly correlated at levels greater than .60. However, correlations between .30 and .59 are also of concern. An important purpose of multicollinearity analysis is to examine the magnitude of the correlations. The following correlations existed between predictor variables at moderate levels from .30-.47. In Table 20, Hispanics were moderately correlated with (a) Specific School Invitations (r= 0.35), (b) Specific Child Invitations (r= 0.41), and (c) Knowledge and Skills (r= -0.42). African-Americans are moderately correlated with (a) Knowledge and Skills (r= 0.33), and (b) FRL (r= 0.34). FRL status are moderately correlated with (a)

Specific School Invitations (r= 0.30), (b) Specific Child Invitations (r= 0.47), and (c) Home Involvement (r= 0.42).

Table 20 *Correlations Between Parenting Variables, Lunch Status, and Ethnicity, N=126 Students*

Variables	1	2	3	4	5	6	7	8	9	10
1. Valance	1.00									
2. Parental Efficacy	0.02	1.00								
3. Roles Activity Beliefs	-	0.21	1.00							
4. General School	0.28	0.27	0.32	1.00						
5.Specific School	0.17	0.21	0.22	0.28	1.00					
6. Specific Child	-	-	0.19	-	0.60	1.00				
7. Knowledge and Skills	0.04	0.46	0.36	0.29	-	-	1.00			
8. Time and Energy	0.11	0.19	0.25	0.06	-	0.02	0.55	1.00		
9. Home Involvement	-	0.07	0.27	0.00	0.39	0.67	0.19	0.34	1.00	
10. School Involvement	0.14	-	0.29	0.23	0.38	0.68	0.02	0.17	0.54	1.00
11. FRL	0.02	-	-	-	0.30	0.47	-	0.03	0.42	0.25
12. African-American	0.05	-	0.14	-	0.21	0.11	0.33	0.17	0.24	0.06
13. Native American	0.20	0.14	-	0.04	-	0.06	-	0.11	0.10	0.17
14. Asian American	-	-	-	0.05	-	0.17	-	-	0.08	0.21
15. Hispanic	0.02	-	-	-	0.35	0.41	-	-	0.27	0.13

Note: *$p < .05$, **$p < .01$.

Table 20 *Correlations Between Parenting Variables, Lunch Status, and Ethnicity, N=126 Students (Continued)*

Variables	11	12	13	14
1. Valance				
2. Parental Efficacy				
3. Roles Activity Beliefs				
4. General School				
5.Specific School				
6. Specific Child				
7. Knowledge and Skills				
8. Time and Energy				
9. Home Involvement				
10. School Involvement				
11. FRL	1.00			
12. African-American	0.34	1.00		
13. Native American	0.17	-	1.00	
14. Asian American	0.26	-	-	1.00
15. Hispanic	0.24	-	-	-

The Hosmer and Lemeshow test is a statistical test for goodness-of-fit for logistic regression models. Chi squared statistics were calculated based on comparing expected frequencies derived from the linear model with observed frequencies; the formula summed the difference between observed minus expected frequencies squared and divided by expected frequencies for each cell. The desire was for the *p*-value to not be significant which would indicate that the model predicted values were not statistically significantly different from the observed values. The results of the Hosmer and Lemeshow tests are presented in Table 21; the parenting variables were not related. The results are derived from the final fitted models, specifically Model 2 for all 10 parenting variables.

Table 21 *Results of Hosmer and Lemeshow Tests, N=126 Students*

Parenting Variable	χ^2	***df***	***p*-value**
Parental Efficacy	13.48	8	.096
Specific Child Invitations	9.29	8	.319
Role Activity Beliefs	8.90	8	.351
Knowledge and Skills	8.62	8	.375
Valence	7.64	7	.366
School Involvement	7.37	8	.498
General School Invitations	5.71	7	.574
Home Involvement	5.35	7	.617
Specific School Invitations	3.12	8	.926
Time and Energy	3.01	8	.934

The nonsignificant results showed that the data fit the model well. The Parental Efficacy variable had the smallest *p*-value. Therefore, it can be inferred that the Parental Efficacy variable was the least among the ten parenting variables for goodness-of-fit.

Inferential Statistics

Inferential analyses were performed to determine the relationship between the parenting variables, SES, and ethnicity and the dependent variable of reading achievement. The first step was to evaluate the null model to find the odds of proficiency versus the odds of non proficiency before considering predictors. Overall model significance was assessed; the -2 log-likelihood (-2LL), chi squared, degrees of freedom, and associated *p*-value assessed the overall model significance (See Table 22). "The -2LL estimate the likelihood that the observed values of the dependent variable may be predicted from the observed values of the independent variables" (Anderson, n.d., p. 4). Ten output files were created, each corresponding to a different parenting variable. Each output file had output for two models. Each model had output for three blocks (0, 1, and 2). Model 1 had ethnicity and SES in Block 1, and parenting was added in Block 2. In contrast, Model 2 had parenting and SES in Block 1, and ethnicity was added in Block 2. The null block is Block 0 in which the proficiency odds are calculated without variables in the model. Blocks 0 and 2 provided the same results in both models. Within the blocks, all relevant variables were entered simultaneously. (See Figure 1, p. 98, for a diagram of these models.) The -2LL, chi squared, and the corresponding *p*-value assessed both goodness-of-fit and the contributions of parenting and ethnicity in Block 2 (See Table 22).

The null model was equivalent to Block 0 in Models 1 and 2. Model 1 had ethnicity and SES in Block 1, and parenting was added in Block 2. In contrast, Model 2 had parenting and SES in Block 1, and ethnicity was added in Block 2. The null model

included no predictors entered into the model. The results were the following: $b = 0.55$, SE(b) = 0.19, $X^2(1) = 8.94$, $p = .003$, Exp(b) =1.74. Therefore, students were 1.74 more likely to be identified as proficient than not proficient before examining the effect of any predictor variables. The results indicated that the logit was significantly different than zero. The null model purpose is to provide a baseline model.

Model coefficients -2 log likelihood (-2*LL),* chi squared statistics, degrees of freedom, *p*-values, and Nagelkerke R^2 are presented in Table 22. The model changed as a block of predictor variables was added. The model chi squared value for Block 2 Model 1 (0.374) was calculated by subtracting *-2LL* of Block 2 Models 1 and 2 (104.837) from Block 1 Model 1 (105.11). The difference is known as the improvement, which shows the change in *-2LL* when blocks of predictors are added to a model. The chi squared for the overall model averaged 60 across the 10 parenting models. The *p*-value is generally nonsignificant. Below, Valence and Ethnicity are used to show how the model chi squared was used to test the hypothesis of whether the model was statistically significantly different from Block 1 to Block 2 in Models 1 and 2. The initial *-2LL* was 105.211. After the addition of Valence in Block 2, the *-2LL* was 104.837. The model chi squared statistic and the improvement statistic were calculated as 105.211 – 104.837 =.374 with a *p-value* of .541. This indicated that the addition of Valence in Block 2 did not significantly improve the model's ability to predict students' proficiency status. In Table 22 all the parenting variables are statistically nonsignificant.

The Nagelkerke R^2 can be interpreted in the same manner as R^2 in multiple regression, that is, the percent of variance in the dependent variable explained by the model (see Table 22). The Nagelkerke R^2 has a maximum value of 1 and a minimum

value of 0. The Nagelkerke R^2 from the present analyses averaged approximately 52% across the models, which is a relatively high level of explanatory power.

Overall model results and goodness-of-fit.

The complete regression model is presented in Table 22 to show the relationship between the ten parenting predictor variables, SES as measured by Free and Reduced Lunch status, and ethnicity and the dependent variable, reading achievement expressed as proficiency and non proficiency.

Table 22 *Overall Model Results for Proficiency Status, Parenting Variables, Ethnicity, and SES*

Block or Model	***-2LL***	χ^2	***df***	***p*-value**	***Nagelkerke* R^2**
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (General School Invitations + Ethnicity + SES)		0.114	1	.736	
Block 1 Model 2 (General School Invitations + SES)	113.054				
Block 2 Mode 2 (General School Invitations + Ethnicity + SES)		7.957	4	.093	
Block 2 Models 1 & 2 (General School Invitations + Ethnicity + SES)	105.097	60.29	6	.000	.520
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1(Home Involvement + Ethnicity + SES)		0.030	1	.862	
Block 1 Model 2 (Home Involvement + SES)	112.404				
Block 2 Model 2 (Home Involvement + Ethnicity + SES)		7.223	4	.125	
Block 2 Models 1 & 2 (Home Involvement + Ethnicity + SES)	105.181	60.20	6	.000	.520
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Knowledge and Skills + Ethnicity + SES)		0.293	1	.588	
Block 1 Model 2 (Knowledge and Skills + SES)	112.353				
Block 2 Model 2 (Knowledge and Skills + Ethnicity + SES)		7.435	4	.115	
Block 2 Models 1 & 2 (Knowledge and Skills + Ethnicity + SES)	104.918	60.47	6	.000	.521
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Parental Efficacy + Ethnicity + SES)		0.306	1	.580	
Block 1 Model 2 (Parental Efficacy + SES)	112.391				
Block 2 Model 2 (Parental Efficacy + Ethnicity + SES)		7.486	4	.112	
Block 2 Models 1 & 2 (Parental Efficacy + Ethnicity + SES)	104.905	60.48	6	.000	.522
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Role Activity Beliefs + Ethnicity + SES)		2.268	1	.132	
Block 1 Model 2 (Role Activity Beliefs + SES)	111.327				
Block 2 Model 2 (Role Activity Beliefs + Ethnicity + SES)		8.384	4	.078	
Block 2 Models 1 & 2 (Role Activity Beliefs + Ethnicity + SES)	102.943	62.44	6	.000	.535

Table 22 *Overall Model Results for Proficiency Status, Parenting Variables, Ethnicity, and SES (Continued)*

Block or Model	-2LL	χ2	Df	p-value	Nagelkere R2
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (School Involvement + Ethnicity + SES)		0.436	1	.509	
Block 1 Model 2 (School Involvement + SES)	112.633				
Block 2 Model 2 (School Involvement + Ethnicity + SES)		7.858	4	.097	
Block 2 Models 1 & 2 (School Involvement + Ethnicity + SES)	104.775	60.61	6	.000	.522
Block 1 Model 1) (Ethnicity + SES)	105.211				
Block 2 Model 1 (Specific Child Invitations + Ethnicity + SES)		1.279	1	.258	
Block 1 Model 2 (Specific Child Invitations + SES)	111.147				
Block 2 Model 2 (Specific Child Invitations + Ethnicity + SES)		7.215	4	.125	
Block 2 Models 1 & 2 (Specific Child Invitations + Ethnicity + SES)	103.932	61.45	6	.000	.528
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Specific School Invitations + Ethnicity + SES)		1.567	1	.211	
Block 1 Model 2 (Specific School Invitations + SES)	109.673				
Block 2 Model 2 (Specific School Invitations + Ethnicity + SES)		6.029	4	.197	
Block 2 Models 1 & 2 (Specific School Invitations + Ethnicity + SES)	103.644	61.74	6	.000	.530
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Time and Energy + Ethnicity + SES)		0.118	1	.732	
Block 1 Model 2 (Time and Energy + SES)	113.035				
Block 2 Model 2 (Time and Energy + Ethnicity + SES)		7.942	4	.094	
Block 2 Models 1 & 2 (Time and Energy + Ethnicity + SES)	105.093	60.29	6	.000	.520
Block 1 Model 1 (Ethnicity + SES)	105.211				
Block 2 Model 1 (Valence + Ethnicity + SES)		0.374	1	.541	
Block 1 Model 2 (Valence + SES)	111.627				
Block 2 Model 2 (Valence + Ethnicity + SES)		6.790	4	.147	
Block 2 Models 1 & 2 (Valence + Ethnicity + SES)	104.837	60.55	6	.000	.522

The results in the rows for the parenting blocks come from Model 1 where parenting was entered in Block 2, yielding Block 2 Models 1 and 2. In Table 22, the chi squared values ranged from 0.030 for Home Involvement to 2.268 for Role Activity Beliefs with 1 degree of freedom and statistically nonsignificant results. By adding each parenting variable to its respective model, there were no differences in predicting the proficiency status of the students. A closer examination of the results revealed that (a) Role Activity Beliefs, (b) Specific Child Invitations, and (c) Specific School Invitations may have been statistically significant with increased sample size and power. The three *p*-values of .132, .258, and .211, respectively, were the closest to reaching significance. However, using a $p<.005$ for the level of significance, these values were not statistically significant.

The results in the rows for the ethnicity blocks came from Model 2 in which the ethnicity variable was entered in Block 2. In Table 22, chi squared values range from 6.029 for Specific School Invitations to 8.384 for Role Activity Beliefs with 4 degrees of freedom and statistically nonsignificant results. These results were determined by a subtraction of Block 2 Models 1 & 2 from Block 1 Model 2. The chi squared for the overall model averaged 60 across the 10 parenting models. The *p*-value was generally nonsignificant. Below, Specific School Invitations and ethnicity are used to show how the model chi squared was used to test the hypothesis of whether the model was statistically significantly different from Block 1 to Block 2 in Models 1 and 2. The initial *-2LL* was 109.673. After the addition of ethnicity in Block 2, the *-2LL* was 103.644. The model chi squared statistic and the improvement statistic were calculated as 109.673 – 103.644 = 6.029 with a *p-value* of .197. This indicated that the addition of ethnicity in Block 2 did

not significantly improve the model's ability to predict the students' proficiency status. By adding the ethnicity variable to the model, there were no differences in predicting the proficiency status of the students. A closer examination of the results revealed that (a) Role Activity Beliefs, (b) General School Invitations, (c) Time and Energy, and (d) School Involvement activities may have been statistically significant with increased sample size and power. The four *p*-values of .078, .093, .094, and .097, respectively, were the closest to reaching significance using a $p<.005$ for the level of significance.

The rows that contained the parenting, SES, and ethnicity blocks combined were the same in both models, and as such they were presented only once. These overall model results were always statistically significant because the SES variable was statistically significant and as such it drove the overall model significance; SES explained about 52% of the variance in the dependent variable (see Table 22).

Proficiency classification accuracy.

Table 23 displays the degree to which the model was able to classify students correctly. Block 1 Model 1 contained the ethnicity and SES variables (columns 1, 2, and 3), while Block 1 in Model 2 contained the parenting and SES variables (columns 4, 5, and 6). The predictor variables were not statistically significant in Block 1 Models 1 and 2. Therefore, the parenting independent variables did not add to the power of the models in predicting the reading proficiency status of the students. Within Block 2 when parenting, ethnicity, and SES were all included, proficiency was predicted overall consistently higher on average than in Block 1 for Model 2. The average percentage increase was 10 percent. Overall, an average of 81.1 percent of the cases was correctly

predicted. However, considering the nonsignificant results, the parenting and ethnicity variables did not add to the predictive power of the models in predicting the proficiency status of the students.

Table 23 *Summary of Proficiency Status Classification Accuracy by Parenting Variable*

	Block 1 Model 1			Block 1 Model 2			Block 2 Models 1 & 2		
Parenting Variables	**Not Proficient**	**Proficient**	**Overall**	**Not Proficient**	**Proficient**	**Overall**	**Not Proficient**	**Proficient**	**Overall**
General School Invitations	71.7	87.5	81.7	93.5	68.8	77.8	78.3	83.8	81.7
Home Involvement	71.7	87.5	81.7	93.5	68.8	77.8	76.1	85.0	81.7
Knowledge and Skills	71.7	87.5	81.7	89.1	68.8	76.2	73.9	82.5	79.4
Parental Efficacy	71.7	87.5	81.7	93.5	68.8	77.8	78.3	82.5	81.0
Role Activity Beliefs	71.7	87.5	81.7	91.3	71.3	98.6	84.8	81.3	82.5
School Involvement	71.7	87.5	81.7	93.5	68.8	77.8	73.9	81.3	78.6
Specific Child Invitations	71.7	87.5	81.7	91.3	68.8	77.0	71.7	87.5	81.7
Specific School Invitations	71.7	87.5	81.7	93.5	70.0	78.6	76.1	83.8	81.0
Time and Energy	71.7	87.5	81.7	93.5	68.8	77.8	78.3	83.8	81.7
Valence	71.7	87.5	81.7	87.0	70.0	76.2	78.3	83.8	81.7

Contributions of individual variables.

In the final logistic regression models, ethnicity was not a statistically significant predictor of proficiency status (see Tables 24-33). Similarly, the parenting variables were never statistically significant predictors of students' proficiency status. In contrast, socio-economic status (SES) was always a statistically significant predictor of students' proficiency status. The sample size was 126 students for the analyses (see Table 6). The chi squared statistic was used as the primary test statistic because the dependent variable, Proficiency/Non Proficiency, was categorical. The exponent of B (Exp(*b*)) provided information about the magnitude of the difference between the racial and socio-economic groups, and represented the effect size measure (see Tables 24-33). If the Exp(*b*) associated with a particular dummy variable is greater than one, it indicates that the racial or socio-economic group performed better (i.e., higher odds of proficiency) than the reference group, Caucasian. This was the case in all of the models for Asian students (see Tables 24-33). However, all of these differences were not statistically significant. Similarly, there were no statistically significant relationships between proficiency status and any of the parenting variables. Descriptively, the parenting variables were associated with lower odds of proficiency; the logits (located in the b column in Tables 24-33) were negative and the effect sizes or Exp(*b*)s were less than one. For every one unit increase in parent variables, the logits or log odds of being proficient decreased. There were two exceptions in which Parental Efficacy and Time and Energy logits were positive and Exp(*b*) was greater than 1 (see Tables 25and 31). Therefore, for every one unit increase in these two parenting variables, the logits or log odds of being proficient increased.

Descriptively, these two parenting variables were associated with higher odds of proficiency.

Table 24 *General School Invitations results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.55	1.422	6.23	1	.013	34.80
African-American	-1.12	0.617	3.29	1	.070	0.33
Asian	0.67	0.852	0.62	1	.430	1.96
Hispanic	-1.18	0.769	2.36	1	.124	0.31
Native American	-1.12	1.249	0.80	1	.371	0.33
SES	-3.09	0.703	19.31	1	.000	0.05
General School Invitations	-0.09	0.257	0.11	1	.736	0.92

Table 25 *Home Involvement results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.25	0.973	11.14	1	.001	25.76
African-American	-1.09	0.634	2.97	1	.085	0.34
Asian	0.67	0.857	0.62	1	.433	1.96
Hispanic	-1.10	0.795	1.92	1	.166	0.33
Native American	-1.11	1.259	0.78	1	.378	0.33
SES	-3.06	0.710	18.58	1	.000	0.05
Home Involvement	-0.04	0.226	0.03	1	.862	0.96

Table 26 *Knowledge and Skills results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	4.06	1.859	4.77	1	.029	57.89
African-American	-1.00	0.656	2.33	1	.127	0.37
Asian	0.59	0.859	0.47	1	.493	1.80
Hispanic	-1.31	0.811	2.59	1	.107	0.27
Native American	-1.15	1.249	0.84	1	.359	0.32
SES	-3.15	0.719	19.25	1	.000	0.04
Knowledge and Skills	-0.20	0.364	0.29	1	.589	0.82

Table 27 *Parental Efficacy Results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	-2.29	1.603	2.05	1	.153	9.90
African-American	-1.09	0.617	3.11	1	.078	0.34
Asian	0.71	0.859	0.68	1	.408	2.03
Hispanic	-0.97	0.826	1.39	1	.239	0.38
Native American	-1.24	1.266	0.97	1	.327	0.29
SES	-3.04	0.705	18.60	1	.000	0.05
Parental Efficacy	0.16	0.296	0.31	1	.581	1.18

Table 28 *Role Activity Beliefs Results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	-0.01	2.156	0.00	1	.998	0.99
African-American	-1.26	0.625	4.08	1	.044	0.28
Asian	0.66	0.867	0.58	1	.446	1.94
Hispanic	-1.15	0.784	2.16	1	.141	0.32
Native American	-0.74	1.279	0.33	1	.566	0.57
SES	-3.12	0.708	19.39	1	.000	0.04
Role Activity Beliefs	-0.01	2.156	0.00	1	.998	0.99

Table 29 *School Involvement results from Logistic Regression, N=126 Students*

Variable	*b*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.45	0.804	18.42	1	.000	31.49
African-American	-1.06	0.622	2.91	1	.088	0.35
Asian	0.82	0.893	0.85	1	.358	2.27
Hispanic	-1.05	0.774	1.84	1	.175	0.35
Native American	-0.95	1.281	0.55	1	.457	0.39
SES	-3.06	0.704	18.92	1	.000	0.05
School Involvement	-0.15	0.225	0.43	1	.515	0.86

Table 30 *Specific Child Invitations results from Logistic Regression, N=126 Students*

Variable	*B*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.69	0.809	20.71	1	.000	39.75
African-American	-1.03	0.624	2.70	1	.101	0.36
Asian	0.89	0.884	1.01	1	.316	2.43
Hispanic	-0.75	0.837	0.81	1	.369	0.47
Native American	-1.02	1.256	0.65	1	.419	0.36
SES	-2.92	0.715	16.69	1	.000	0.05
Specific Child Invitations	-0.28	0.252	1.23	1	.268	0.76

Table 31 *Specific School Invitations results from Logistic Regression, N=126 Students*

Variable	*B*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.76	0.82	20.84	1	.000	42.78
African-American	-0.96	0.63	2.34	1	.126	0.38
Asian	0.67	0.86	0.61	1	.434	1.95
Hispanic	-0.82	0.80	1.05	1	.307	0.44
Native American	-1.31	1.26	1.09	1	.297	0.27
SES	-3.00	0.71	18.09	1	.000	0.05
Specific School Invitations	-0.34	0.28	1.47	1	.225	0.71

Table 32 *Time and Energy results from Logistic Regression, N=126 Students*

Variable	*B*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	2.69	1.384	3.78	1	.052	14.74
African-American	-1.14	0.619	3.40	1	.065	0.32
Asian	0.68	0.855	0.64	1	.425	1.98
Hispanic	-1.08	0.778	1.93	1	.165	0.34
Native American	-1.19	1.255	0.89	1	.345	0.31
SES	-3.09	0.703	19.33	1	.000	0.05
Time and Energy	0.10	0.284	.12	1	.732	1.10

Table 33 *Valence Results from Logistic Regression, N=126 Students*

Variable	*B*	SE(*b*)	X^2	*df*	*p*-value	Exp(*b*)
Intercept	3.70	1.141	10.51	1	.001	40.48
African-American	-1.07	0.623	2.97	1	.085	0.34
Asian	0.63	0.852	0.55	1	.460	1.88
Hispanic	-1.10	0.765	2.06	1	.151	0.33
Native American	-0.95	1.287	0.54	1	.463	0.39
SES	-3.10	0.706	19.26	1	.000	0.05
Valence	-0.13	0.207	0.38	1	.540	0.88

Summary

This chapter has presented the data analysis in response to investigation of the relative strength of parent involvement versus ethnicity and socio-economic status (as measured by Free or Reduced Lunch, FRL) in explaining the academic achievement gap between Caucasian, African-American, , Asian, Hispanic, and Native American students as measured by the reading portion of the SSRCA-II assessment. The purpose of the study is to eventually lead to school policies and programs which empower urban parents, teachers and stakeholders to maximize the efficacy of parent involvement. Descriptive results of the ten parenting variables were presented. The parenting variable General School Invitations had the highest mean, and Specific School Invitations had the lowest means. Descriptive results of varying combinations of (a) FRL, (b) ethnicity, (c) proficiency status, and (d) grade levels were presented and discussed in relationship to student achievement as measured by reading proficiency.

Model assumptions were presented, and it was shown that there were no major violations of linearity and normality. Multicollinearity results were shown, and there were moderate levels of correlations between (a) FRL, (b) ethnicity, and (c) individual parenting variables. The following correlations existed between the above-mentioned predictor variables at moderate levels from r = .30 to r = .47 for Hispanic, African-American students, FRL, and primarily the parenting variables of Specific Child Invitations and Specific School Invitations. The violations were enough of a concern to be noted as a limitation to the study. Hosmer and Lemeshow tests results were presented

as tests for goodness-of-fit. The nonsignificant results showed that the data fit the model well.

The inferential statistics used logistic regression analyses. Parenting and ethnicity variables did not significantly improve any of the models' ability to predict students' proficiency. However, the control variable, SES, remained statistically significant through all of the analyses. The Nagelkerke R^2 averaged 52% across all the models, which were relatively high levels of explanatory power. Referring to the research question, the major finding from the research showed that SES was a significant predictor of student achievement. The study's findings are discussed in Chapter 5.

Chapter 5: Summary, Discussion and Conclusion

This chapter contains a brief summary of the study followed by discussion of the findings and the conclusions that have been drawn.

Summary

This summary includes an introduction to the study, brief review of related literature and the conceptual framework for the study, the methodology used, and a summary of the findings.

Introduction

The introduction to the dissertation provides a historical account of the achievement gap from 1954 with the Brown versus the Board of Education decision in its opening and leads us to the research question which examines the relative strength of relationships between parent involvement versus ethnicity and the dependent variable of achievement as measured by the reading achievement of students of different racial groups. A pathway has been laid to answer the research question and provide new knowledge to school districts and the research community with a focus on equity, achievement and excellence for K-12 students. Hopefully, it will raise new questions with regards to the achievement gap and empower parents and other stakeholders.

This study sought to find answers to the following research question: What is the relative strength of parent involvement versus ethnicity in predicting student reading achievement? Parent involvement and ethnicity are both independent variables. Socio-economic status (SES) as measured by free-and-reduced-lunch status was also an independent variable. Parental involvement was measured on a continuum from

virtually non-existent to highly involve across racial backgrounds. The racial backgrounds being examined were African-American, Asian, Caucasian, Hispanic, and Native American. It was of interest to me to learn about the relative strength of parental involvement and the extent to which different dimensions of involvement are related to achievement versus ethnicity and socio-economic status. I believe that knowing about these relationships can as assist urban school districts in the development of effective school programs and policies that support possible solutions to closing the academic achievement gap.

Review of Related Literature

Ethnicity has been considered a major contributing factor to the academic achievement gap and proficiency status because of the historical performance data of students of color on the SSRCA- IIs with the exception of Asian students. "The state in which the research was carried out has a 35% disparity in the graduation rates between white and black students, the worst such gap in the country. This state has the nation's lowest high school graduation rates for Latino and Native American students" (City Site of Research Foundation, 2013, p. 1). Graduation rates impact SSR; as a result SSR could increase the economy $1.3 billion dollars by 2020 if the graduation rates for students of color mirrored Caucasian students (City Site of Research Foundation, 2013). A disparity of 43% of Latino students are academically ready for kindergarten compared to 90% Caucasian students (City Site of Research Foundation, 2013).

The instrument used to assess parent involvement, the Parent Involvement Project Parent Questionnaire (PIPPQ) and the Hoover-Dempsey and Sandler Model of Parent Involvement (2005) were well researched and evidence based. The initial expectation was

that parenting variables would result in statistical significance through the entire model. The inferences drawn from the results would inform the district on how parent involvement affects student achievement. However, as a researcher, limitations and issues are acknowledged during the study, and the researcher needs to proceed cautiously with any assumptions and interpretations.

Educational pioneer and pragmatist, John Dewey advocated that educators need to learn about the conditions of the community in which they teach. They need to acquire the perspectives that have impacted the community historically, economically and occupationally. These perspectives help to build a relationship and understanding on which to connect "knowledge of experience and content of new knowledge" (Williams, 2003, p. 21) toward meaningful learning among students. Between 1970 and 1990, the African-American and Caucasian achievement gap was reduced by 50 percent in reading and approximately 33 percent in mathematics. Since the 1990s, the gap has reversed this progress and continued to widen until 2007; on average, lower income students and students of color fall three grade levels behind Caucasians by the time they enter eighth grade (Manning & Kovach, 2003; Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009).

Students perform academically better when they have parents and a family network that supports, nurtures, teaches, and provides for them. The first teachers students have are their parents; strong, resilient parents teach their children through example how to cope with stress and meet high expectations (Winfield, 1991). It is critical for students to feel supported and protected within their social environment.

When students face struggles in their school lives, it can be reassuring to know that their parents support them and provide a safety net.

A disturbing reality is that with all the standards-based reforms in place as well as the NCLB Act requirements, we as a nation have such alarming disparities among school-aged students. The achievement gap appears prior to students entering kindergarten; a holistic approach to closing the gap requires that parent education programs be put in place to curtail the persistent gap (Manning & Kovach, 2003). These programs would be designed to support student learning inside and outside the classroom. Many parents need guidance on how to best assist their children in pursuing academic excellence (Trumbull, Greenfield, & Quiroz, 2003).

Connections exist between the survey dimensions and the six areas of parent involvement provided in the literature review. The survey for the study included three dimensions: (a) personal motivators, (b) contextual invitation motivators, and (c) family life context. The survey dimensions are influenced by the six areas of parent involvement: (a) family structure, (b) school structure, (c) parenting styles, (d) desegregation and resegregation, (e) wealth, income, and social class, and (f) standardized testing. More specifically, connecting the literature to the survey instrument provides insight into parenting behaviors. Time and Energy and Parent Efficacy are influenced by family structure; the more adult members of the family in the household, the lesser amount of time and energy exerted and needed by one parent. Parent Efficacy addresses the belief of parental actions in accomplishing academic goals. Therefore, desegregation and resegregation are paired with parent efficacy.

School structure is a major factor into the type and appropriateness of the General Invitations and the Specific School Invitations. The school administration needs to establish a welcoming climate. The teachers need to provide invitations for parent involvement in multiple forms. Parenting styles are related to Valence, which is a parental attitude toward schools, and to Role Activity Beliefs, which delve into the important role of parents in student achievement. The types of parenting styles are authoritative, authoritarian, and permissive. The authoritative parenting style aligns with higher levels of Valence and Role Activity Beliefs. Higher levels of wealth, income and social class allow for increased frequency of school involvement by parents. Finally, standardized testing results are more likely to increase with Specific Child Invitations, Knowledge and Skills and Home Involvement because children's request for their parents assistance activates parent involvement. Increased Knowledge and Skills may indicate higher skill sets among parents coupled with increased frequency of Home Involvement.

The achievement gap is comprised of multiple factors. As discussed in the review of literature, the combinations and persistence and/or continued existence of differences among children on the six areas of parent involvement factors are some of the reasons the gap continues to exist or make the gap more visible. Family structure was identified as an important component of parent involvement. Two-parent households were more beneficial to student achievement than single-parent households; specifically, single mothers with preschool children can face challenges that adversely affect student achievement.

School structure is markedly different between elementary and secondary settings. Parent involvement at the school level lessens as students make transitions from

elementary to secondary settings. When Title I funding is available to school sites and districts, research–based reading intervention programs and parent educational training have shown gains in student achievement (Shaver & Wall, 1998).

In Baumrind's (1991) study (as cited in Engerman & Bailey, 2006), authoritarian, authoritative, and permissive are three distinct parenting styles. Authoritative style has been common among higher achieving students across racial groups (Engerman & Bailey, 2006). Authoritarian style has been more common among African-American students (Smetana, 2000). Parental support was deemed more effective than any one of the aforementioned parenting styles (Steinberg, Dornbusch, & Brown, 1992).

As we regress from desegregation to resegregation in our large urban public schools, we are finding that Caucasians and students of color are attending schools that are racially isolated, and the thrust of the 1954 Brown versus Board of Education Supreme Court decision is in jeopardy of remaining viable and relevant. Increased academic learning and instructional time periods beyond the standard nine-month school year are crucial to avert the regression or ill effects of reverting to the educational system of a pre-Brown decision era. Summer academic growth is more likely to be the result in resegregated schools when the financial investment in summer learning is employed and used to reverse academic decline.

The addition of wealth as an element of SES has shed new light on the racial disparities in achievement; with increased wealth, parents are able to provide more cultural capital opportunities and learning experiences for their children. We must acknowledge as a nation that accountability is at least an expectation, if not a mandate, on behalf of parents, students, and teachers. We are functioning in an age of standards-based

curriculum and standardized testing to meet the requirements of NCLB. Many students of color are disproportionately not meeting the prescribed proficiency levels when compared to Caucasians. Schools can help compensate when lower SES is dominant in a school district by integrating "cultural capital" enrichment activities, also known as extracurricular, during the school day (Hale, 2001).

It is crucial for all researchers to identify factors, conduct research and add to the body of knowledge. My present study will add to the body of knowledge by examining relationships of the relative strength of parent involvement versus ethnicity and SES in predicting student reading achievement, and to what extent, if any, the academic achievement gap is affected. The study will help one school district develop programs that have the potential to move the process forward of closing the achievement gap. It will extend the literature base described here by providing research-based data to district leadership where the overriding issue of the achievement gap is a major piece of the district's strategic plans to prepare students to be contributing global citizens. Hoover-Dempsey (2005) was used as the conceptual model to guide the present study.

Methodology

In chapter 3, the purpose and research question were revisited. The post positivism epistemology was defined as providing the philosophical foundation to the study. Furthermore, a discussion of the distinction between epistemology and methodology was provided. The correlational cross-sectional research design was presented as a means to determine whether, and to what extent, a relationship exists between the predictor variables (parent involvement scales, SES, and ethnicity) and the dependent variable (reading achievement).

The sample and target populations, parents in the school district Connecting Parents to Educational Opportunities (CPEO) program and their children, were defined and described followed by the measures section. The instruments section focused on parent involvement and the reading achievement measures. The PIPPQ and its constructs were discussed in detail as well as the alignment of the conceptual model to the ten subscales. The reliability and validity of subscales analyses were presented and discussed. The reliability of subscales were measured using coefficient omega and coefficient alpha. The subscales were measured for validity using confirmatory factor analyses. In the reading achievement section, the processes and procedures were presented on the development of the SSRCA-II testing items which included the state's reliability and validity analyses. The testing items were aligned with the State Site of Research academic standards and respective grade level benchmarks.

Procedures to obtain the necessary University IRB and the district's parent program approvals of the data collection procedures were discussed. The missing data analysis showed results of a different target sample from the original sample for the study who returned surveys. The sample used in the data analysis was proportionately more Caucasian and included more English speaking students than the full original sample who returned surveys. Finally, the data analysis section defined and described the variables used in the study and the logistic regression analysis used to cumulatively answer the research question.

Findings

In Chapter 4, the data analysis was presented in response to the investigation of the relative strength of parent involvement versus ethnicity and socio-economic status (as

measured by Free or Reduced Lunch, FRL) in explaining the academic achievement gap between Caucasian, African-American, Asian, Hispanic, Native American students as measured by the reading portion of the SSRCA-II assessment. The purpose of the study was to eventually lead to school policies and programs which would empower urban parents, teachers and stakeholders to maximize the efficacy of parent involvement. Descriptive results of the ten parenting variables were presented. The parenting variable General School Invitations had the highest average score, and Specific School Invitations had the lowest average score. The questions on General School Invitations referred to the school climate and how welcoming schools were to the parents. The questions on the Specific School Invitations referred to the frequency of parent participation based on the parents' responses to the teachers' requests for parent involvement. Parents believed in general to feeling welcome to the school, but their actions in terms of participation frequency did not align with their beliefs. Descriptive results of varying combinations of (a) SES as measured by Free/Reduced Lunch (FRL), (b) ethnicity, (c) proficiency status, and (d) grade levels were presented and discussed in relationship to student achievement as measured by reading proficiency.

Regression model assumptions were presented, and it was shown that there were no major violations of linearity and normality. Multicollinearity results were shown, and there were moderate levels of correlations between (a) FRL, (b) ethnicity, and (c) individual parenting variables. The following correlations existed between the above-mentioned predictor variables at moderate levels from $r = .30$ to $r = .47$ for Hispanic, African-American students, FRL, and primarily the parenting variables of Specific Child Invitations and Specific School Invitations. The violations were enough of a concern to

be noted as a limitation to the study. Hosmer and Lemeshow test results were presented as tests for goodness-of-fit. The nonsignificant results showed that the data fit the model well.

The inferential statistics used logistic regression analyses. Parenting and ethnicity variables did not significantly improve any of the models' ability to predict students' reading proficiency. However, the control variable, SES, remained statistically significant through all of the analyses. The Nagelkerke R^2 averaged 52% across all the models, which were relatively high levels of explanatory power. Referring to the research question, the major finding from the research showed that SES was a significant predictor of student reading achievement.

Conclusions

The conclusion section contains discussion of the findings for the study. It opens with discussion of the ethnicity, parenting and socioeconomic predictors followed by the implications for practice. Cradle to prison pipeline, equity, business education, and broader implications are included in the implications for practice section.

Ethnicity Predictor

The hypothesis stated that parenting involvement would be stronger than ethnicity as a predictor of students' reading proficiency status. The analysis showed that SES was the strongest predictor. Ethnicity had no increased effects above and beyond parenting and SES in predicting students' reading proficiency status. However, the ethnicity variable resulted in larger chi squared values and smaller *p*-values than the parenting variables. Therefore, the ethnicity variable explained more variance which added more predictive power than the parenting variables. Upon closer examination of the ethnicity

variable, the four parenting models which were the closest to reaching statistical significance were: (a) Role Activity Beliefs, (b) General School Invitations, (c) Time and Energy, and (d) School Involvement. The model coefficients were influenced by the sample size and statistical power; the parenting variables may have been statistically significant with increased sample size and power. Individually and collectively, the *p*-values for ethnicity were lower than any of the parenting variables. Descriptively, parents of different ethnicities agreed to the importance of taking responsibility to ask themselves: (a) how they can contribute positively to their children's academic success; (b) how they can maintain open communications with the school; and (c) how they can commit time and energy to the school and home in supporting their own children's academic achievement. However, as much as the parents were espousing their beliefs, they recorded a lower participation frequency level at the school level.

The ethnicity variable within the General Invitations model indicated that, across ethnicities, General Invitations corresponded with the school climate, whether or not and to what degrees the schools were welcoming and empowering to parents, which motivated parents to be more involved in their children's academic achievement (Griffith, 1998). The General Invitations model indicated also how well the principals kept open communications to the parents between school and home. The Time and Energy variable reflected the demands on the parents due to employment obligations from one or more jobs and, in addition, the personal responsibility to care for children and the elderly. These issues have limited parents' opportunities to be involved at the schools and may also have impacted involvement at home (Griffith, 1998; Hoover-Dempsey, Bassler, & Burow, 1995). With the recurrence of employment disparities in the United States

between racial groups, the Time and Energy variable can be influenced disproportionately; thus, parents of color may desire to be more involved, but obligations may have inhibited them (Austin, 2012a, 2012b, 2012c). However, in my study, employment disparities were not evident among racial groups. CPEO parents may have more time to invest in their children's academics because, as a collective group, they may have been more likely to value education and its future employment opportunities. Parents' high average score on the Time and Energy variable indicated that parents had enough time and energy to help their children at home and participate in school activities. School Involvement scale's moderate average score indicated that people hold positive beliefs regarding parent involvement, but their participation frequencies are inconsistent with beliefs.

The distribution of proficient students was widely different between students of color and Caucasian students, except Asian students, but not statistically significantly different. These findings were consistent with SSRCA-II assessment results for testing years 2009, 2010, 2011. Asian students in the PSD earned the following proficiency status in reading: (a) 2009 – 47% , (b) 2010 – 49%, and (c) 2011 – 54% (SSRDE, 2014a). Caucasian students in the PSD earned the following proficiency status in reading: (a) 2009 – 85% , (b) 2010 – 86%, and (c) 2011 – 86% (SSRDE, 2014a). The contrasts between different ethnicity groups were descriptive and framed within the context of the achievement gap, in which the reference group was Caucasian students.

This present study focused primarily on the existing achievement gap in an urban school district. Grouping the data by ethnicity was important to increasing knowledge on the achievement gap. The achievement gap was previously defined as academic

differences in achievement for African-American students and other students of color as compared with Caucasian students (Carpenter, Ramirez, & Severn, 2006). It became apparent from the data analysis that ethnicity was closer to statistical significance in predicting reading achievement than parenting.

Parenting Predictors

Parenting had no increased effects above and beyond ethnicity and SES in predicting students' proficiency status. The present study had bimodal distribution for the dependent variable which may have indicated that two distinct parent groups existed: (a) highly involved parents seeking to sharpen their parenting skills; (b) parents seeking to become more involved and needing to learn better techniques and strategies of improved parenting. The question emerges as to why the parenting variables were not statistically significant. Parent involvement tends to decline as children move from elementary to middle to high schools. One of the main reasons given was that students seek to be more independent and autonomous; elementary children are more dependent upon their parents to make sound decisions regarding academic achievement (Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins & Closson, 2005). In the present study only a fifth of the students were at the elementary level.

The findings regarding parent involvement and SES were supported by Hale (2001). The school leadership is expected to fulfill the parental role when deemed necessary because the leadership has the resources to promote academic achievement through in loco parentis committees. The school is the center. Hale posited the idea of creating an in loco parentis committee for each elementary classroom. The committee would consist of a parent representative, teaching peer, and community representative;

collectively it would monitor the progress and develop plans for underperforming students at the elementary school level. Hale espoused that solid foundational preparation in elementary schools prepared students for academic success at the middle and high school grade levels. Based on voluntary submitted narratives provided on the current survey, parents indicated that they were more actively involved in their child's academic life during elementary school versus middle or high school.

The Role Activity Beliefs, Specific Child and Specific School Invitations were the three parenting models which were the closest to reaching statistical significance. According to Walker, Wilkins, Dallaire, Sandler, and Hoover (2005), three different patterns of role constructions were suggested after completion of extensive qualitative research investigations used to create the questionnaire. The three role construction patterns were parent-focused, school-focused, and partnership-focused. Parent-focused role construction suggested that parents held a belief and behavior system that they were the most responsible for their children's education. School-focused role construction suggested that the school was the most responsible for children's education, and partnership-focused suggested both the parents and school are responsible for children's education. The school-focused pattern revealed parent passivity; parent-focused and partnership-focused patterns revealed activity. High means on the Role Activity Beliefs and Valence scales indicated that the parents in the current study tended to follow the partnership-focused pattern. On the Role Activity Beliefs scale, both passive and active beliefs were assessed; higher scores implied more active role beliefs. Albeit the high means of Role Activity Beliefs, parents' actions did not align closely between agreement measures versus participation frequencies.

The Specific School Invitations encompassed teacher invitations which serve to motivate some parents to be involved. Examples include homework assignments that incorporate the parents. Many of these types of assignments have the children interview their parents on family history, or their school experience when they were in the same grade as the children. Another example is standing invitations to parents to visit the classroom when they are available or to be guest speakers on a subject or topic the class is studying (Balli, Demo, & Wedman, 1998; Walker et al., 2005). Open communication between the teacher and the parent is another example. With email, voice mail, and online grade books, parents are able to communicate with their children's teachers more easily and regularly. In Site of Research, parents can access their children's academic performance by subject area online; if they have any questions or concerns, there is a hyperlink for the parents to quickly email the teacher and ask for the teacher to contact them or set up an appointment. Every parent does not have home access to computers; Site of Research encourages parents to go to the public libraries to gain access. The traditional paper report cards are still sent home at mid-quarter, end of quarter, and end of semester, or essentially at 4-week intervals. Computer access is helpful but not imperative for parents to be kept informed.

Specific Child Invitations included specific requests to parents from their children in the areas of homework and difficulties with schoolwork in general. "Invitations to involvement from the child are influential because they express the child's need for and willingness to accept parental help" (Walker et al., 2005, p. 94). The Specific Child Invitations variable may arise from children's request of their parents in implicit, explicit, and spontaneous ways (Hoover-Dempsey et al., 2005). In implicit ways, parents may

have observed the learning needs of their children; as parents they understood that their children desire assistance without direct requests from the children. For example, parents may observe their children struggling with homework completion. In turn, parents may be inclined to become more involved and support their children's learning needs at home. In explicit ways, children made direct requests to their parents for assistance; the requests may have been for homework assistance, about situations at school, or concerning events occurring at school (Hoover-Dempsey, Bassler, & Burow, 1995). Finally, children may share some enjoyment they received when their parents participated in their learning and requested more involvement. Epstein (as cited in Balli et al., 1998) found that students' reading scores increased between fall and spring because their teachers would frequently request parent support on homework. Parents were aware of the content, and homework routines, and expectations.

Edelman (2013) and Hale (2001) espoused that the parents are overworked and focused on day-to-day survival; they posited that the parents may not have the skills to help their children achieve academically in school. Edelman and Hale believed that all children are capable of academic achievement if the appropriate safety nets are put in place, managed and monitored for accountability purposes. It is noteworthy to state that schools are the places where students attend and learn on a daily basis. Furthermore, schools have greater access to resources critical to successful student achievement.

"What the best and wisest parent wants for his own child, that must the community want for all of its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy. All that society has accomplished for itself is put, through the agency of the school, at the disposal of its future members"

(Dewey, 1907, p. 19). As we examine parent involvement, Dewey's words were written a century ago and impart wisdom of the tasks before our nation today of how the schools and the parents are connected. As a nation and members of the human race, when we embrace the importance of parenting and schools, it becomes apparent that parents may serve as guides to academic achievement for their children. To encourage such parental guidance, the school and community stakeholders need to form healthy partnerships which support schools, students, parents, and academic achievement.

Socioeconomic Status Predictor

According to Rothstein (2004a), closing the achievement gap requires our nation to address the underlying SES disparities. The significant SES finding is consistent with the research of Edelman (2003, 2007, 2013), Hale (2001) and Haycock (2001). However, the SES finding contradicts Jeynes (2003), Mau (1997), and Sanders (1998) because their research posited the importance of parent involvement in contributing positively to the academic success of their children. The pendulum swung toward SES rather than parent involvement because of a lack of equity of opportunities and a lack of equitable distribution and access to resources historically. According to Ravitch, reformers espoused that fixing the schools preceded eliminating poverty. She believed that such thinking is superficial and incongruent. Ravitch advocated for reducing/eliminating poverty first and any the problems associated with it. At the point of minimal poverty, the schools and the achievement gap issue would dissipate. Reformers posited that: "It ought to be easier to 'fix' schools than to 'fix poverty, because poverty seems so intractable. Our society has grown to accept poverty as an inevitable fact of life" (Ravitch, 2013, p. 93). Furthermore, Ravitch posited that advantaged benefit academically through easier

access to resources and materials; therefore, disadvantaged students defined as low-SES would benefit academically from easier access channels.

Hart and Risley (2003) supported the idea that disparities in vocabulary expansion and language developments were direct results of parent involvement. Parents are children's first teachers. Early childhood educational successes are based on the transfer of vocabulary and language usage by the parent to their children. Hart and Risley's (2003) study found that there is a 30 million word gap of total words heard among children whose parents were high-SES versus low-SES parents regardless of ethnicity. The manner and degree of parent involvement directly impacts the outcome of the children's vocabulary and language development which leads to whether or not and to what degree of producing well-developed readers. This is an example of the intersection between parent involvement and SES. Parents' education level, especially mothers', is highly predictive of achievement of children in reading. SES is the best predictor of adult illiteracy (R. Park, personal communication, July 18, 2014).

There is a need to focus on SES to address the achievement gap and student achievement on SSRCA- II standardized tests. The best approach to answering the research question is based on the SES control variable maintaining its statistical significance through the entire model testing using logistic regression. The inferences drawn from the descriptive statistics as well as the regression statistics were students whose households have greater access to the social and cultural capitals performed better than those with lesser access. The inferences are based on the tendency of higher SES families having access to varying empowering networks. Low-SES families may have experienced being highly mobile or overtaxed from working many hours.

Parents who struggle economically are synonymously associated with low-SES, and often times they may not have the political power to impact their circumstances; thus the cycle of poverty continues (Lazar, Edwards, & McMillon, 2012). Johnson (2012b) posited that education is the equalizer against poverty. The cycle of poverty can be disrupted or dismantled; however, pathways are needed to guide parents to economic sustainability. Social capital is generated through networking. Cultural capital relates to status and enriched learning experiences in the arts, literature, and museum exhibitions and lectures (Orr, 2003). Low-SES parents have social and cultural capital, but they may not have the political power or capital to make inroads into upwardly mobile opportunities.

Traditionally, SES has included three major components: income, education, and occupation (Orr, 2003). In addition, wealth is now considered to be a major component of SES (Orr, 2003). Accumulating wealth entails home ownership, increases in income through employment, marriage, and college education (Institute on Assets and Social Policy (IASP), 2013). In 2010, during the midst of the recession, home ownership for Caucasians was 75% and for African-Americans and Hispanics 50% according to the Urban Institute's Opportunity and Ownership project (Rowley, 2013). Therein lays a stark difference; home ownership builds equity and wealth unless the real estate market is experiencing a downturn. First-time, lower-income home purchasers also need access to affordable mortgages. Investment in home ownership is exercising sound judgment because students who reside in such dwellings benefit from knowing they have housing stability. Five thousand students, or approximately 1 in 7 students, were highly mobile in Site of Research during 2012-2013 (Johnson, 2013). Based on a 25-year study of the

racial wealth gap, in Caucasian households every $1 increase in income yielded $5.19 in wealth growth; in contrast, in African-American households every $1 increase in income yielded $0.69 in wealth growth (IASP, 2013). One of the reasons for the disparities is that African-American unemployment rates generally are double the rates of Caucasians (Austin, 2013). In the 25-year study (IASP, 2013), income and education were positively correlated. The mutually reinforcing ideas of wealth leading to education and education leading, in turn, to higher income and wealth creation reiterates the correlation that exist between income and education.

Students in the 21st century are expected to go to college and earn a degree, thus expanding their own opportunities to increase earnings and level of employment statuses as well as to accumulate wealth. The CPEO program in the Site of Research has partnered with a major university and community college to financially support the children of CPEO parents who may decide to attend college in the future. There are certain criteria: (a) students must be admitted to one of the participating colleges, (b) must meet family income guidelines, and (c) complete the 7-week CPEO course at a Title I school (CPEO, 2010).

Finally in the 25-year study of the racial wealth gap (IASP, 2013), marriage was found to have a significantly positive impact on wealth for Caucasian couples resulting in positive net worth portfolios, economic security, and opportunities for future generations. The African-American couples possessed lower-level portfolios to generate savings for emergencies situations. In IASP's (2013) research study, ethnicity and SES provided overlapping information about two racial groups.

According to the National Center for Education Statistics (2014), the NAEP data results showed the following:

At grade 4, only the average reading scores for White students were higher in 2013 (232) than in both 2011 (231) and 1992 (224). The 2013 scores for Black (206), Hispanic (207), and Asian/Pacific Islander (235) 4th-graders were not measurably different from the 2011 scores, but the 2013 scores were higher than the 1992 scores (192, 197, and 216, respectively). At grade 8, the average reading scores for White (276), Black (250), Hispanic (256), and Asian/Pacific Islander (280) students were higher in 2013 than in 2011 and 1992 (Elementary and secondary education section, "Reading Performance" para. 4).

In contrast to the IASP findings, a charter school in the sample of this study beats the odds. The student body was approximately 91% low-SES and 99% African-American, and the students' SSRCA- II scores exceeded the average SSR scores for reading in 2011. In this charter school, 3rd through 6th grade students scored 77% proficiency, and 75% was the State Site of Research average reading proficiency score. These students performed well on the SSRCA-IIs despite their families' SES status (Barney, 2011). CPEO support is needed for parent involvement that leads to enriched learning experiences for children.

Limitations

There are a number of limitations associated with the present study. First, the response rate was dependent upon availability of the participants among the CPEO group of parents. Family and work schedules may have imposed time constraints. Second, high mobility rates were prevalent among school district parents and students. Many current

postal addresses were incorrect. Third, parents of children who were not performing well academically may have been reluctant to respond. Fourth, language and reading proficiency skills may have served as an impediment to the participant in completing the survey. Fifth, parent education levels may have created feelings of insecurity on behalf of the parents to answer and complete the survey. The time frame of the survey impacted the number of responses; the study had an 11% response rate.

The sample collected differed from the sample analyzed in the logistic regression. The missing data analysis revealed how the non-respondents (i. e., respondents with missing data) among those who returned the survey differed from the respondents (i.e., respondents without missing data). Ethnicity and language showed the highest chi squared values as reflected by the low *p*-values. SES was nonsignificant in the missing data analysis. As a result of missing data, my final sample changed to proportionately more Caucasian and English-language speaking than the original sample who returned surveys. Among the parenting variables, only three variables were not statistically significant; they were: General School Invitations, Parental Efficacy, and Valence. Analysis of the missing data for the seven significant parenting variables showed that the missing data group had higher mean scores on these parenting scales compared to the non-missing data group; the implication is that the missing data group may have been more involved in parenting than the non-missing group.

Multicollinearity occurs when there are high correlations (.60 or higher) between the predictor variables; moderate correlations between r = .30 and r = .59 were also of concern. There were eight moderate correlations of concern reported among the 15 predictor variables. Finally, the results of the present study were interpreted within the

framework of the stated limitations. The present study incurred limitations that impacted the results.

Implications for Practice

Parent involvement and ethnicity predictors were found not to predict the students' proficiency status on the SSRCA-IIs. However, the control variable, SES, was found to predict the students' proficiency status. The findings were not expected but informative in terms of reshaping the discussion on academic achievement. The present study was not an experiment. Therefore, causal claims cannot be made, but implications for practice may be drawn from the data analyses. Insights gained and ideas to ponder based on the data analyses are the (a) Cradle to Prison Pipeline, (b) equity of opportunities, (c) business education, and (d) broader implications. These implications are discussed in the following sections.

Cradle to Prison Pipeline

CPEO, a parent empowerment program, started its first of seven sessions with a focus on societal ills as a result of poverty. The Cradle to Prison Pipeline was presented day one of the CPEO program to its parent participants (CDF, 2007). It was shocking and enlightening at the same time. Cradle to Prison Pipeline has been defined and known by the Chidlren's Defense Fund as a national crisis which proclaims an intersection between poverty and ethnicity is placing African-American males at risk of one in three odds of going to prison and Latino males of one in six odds (CDF, 2007). The statistics are alarming. The pipeline must be redirected to education and economic opportunities. Parents attending the program did not envision their children actively involved in the Cradle to Prison Pipeline (CDF, 2007). Within the CPEO program, the parents' SES

varied from poverty to upper middle class; ethnic diversity was evident, and culture was acknowledged and celebrated with support of translators for Somali, Hmong, and Spanish speaking parents.

Poverty has been driving the relationship between the Cradle to Prison Pipeline as oppose to the Northside Achievement Zone's (NAZ) cradle to career pipeline (Marty, 2012; University of SSR, 2013). The U. S. Department of Education's Promise Neighborhoods grant, a $28 million grant over 5 years is the main funding source of NAZ. It has been modeled after the Harlem Children's Zone (HCZ) which prepares low-SES students for college early in their school journey (Harlem Children's Zone, 2012). NAZ has been a collaborative effort which includes the following entities: (a) The Center for Early Education Development (CEED) at a major university, (b) urban school district setting for this study , and (c) 50 or more community organizations. Poverty has been associated with societal ills that channel individuals to participate in activities that lead to a more impoverished way of life (CDF, 2007). NAZ and HCZ provide alternative pathways away from poverty through education. CPEO could serve as a repository of information and dessiminate the information to parents seeking alternative, viable pathways to escape poverty. The prominence of SES in affecting reading achievement in this study reaffirms the importance of these community efforts to address the problems of poverty.

Equity

Rothstein (2004b) strongly opposed the notion that children's race and family economic status predict their ability to acquire needed skills to compete in society and the workplace in particular. Equity of opportunity is an important strategy and policy to

implement because many low-SES parents and students lack access opportunities to advance educationally and economically. From one perspective, viewing equity of opportunity as paramount is equivalent to the investment in human capital. It becomes imperative that pathways be designed with students working toward their fullest potential. The Governor of the state that was the site of this research announced at the conclusion of the 2013 Legislative Session that this state was investing in all-day kindergarten for every child. It was optional for school districts; at the time of this announcement, 54% of all districts were providing all day kindergarten. An appropriation of $134 million has been made for this historic investment (Office of Governor, 2013). Furthermore, the State Site of Research Department of Education (SSRDE) has made scholarships available to state site of research highest need families for high-quality early childhood programs. An appropriation was made of $23 million for fiscal years 2014 and 2015 for a total of $46 million (SSRDE, 2013). The Obama administration has proposed that $75 billion be spent over 10 years to expand funding of preschool programs; this state would receive $38 million (Smith, 2013). The Education Commissioner acknowledged that 8,000 more State Site of Research students will be able to attend child care and preschool. However, there is a waiting list with thousands of preschoolers (Smith, 2013). Even with the additional funding, the early childhood education system is still in need of more funding.

Fostering opportunities for low-SES parents may indeed involve the school system to a greater degree compared to current involvement in order to reverse the effects of the cycle of poverty. The findings in the present study revealed that SES was impacting the home and school more than the parenting and ethnicity predictors. To

break the cycle of poverty at the early stages would require fully-funded, high-quality early childhood education for all children (Edelman, 2013). There is a critical need to reverse the present-day readiness for school outcomes. Therein lays the full funding dollars needed for early childhood education in order to reduce the achievement gap which is presented later in the text. The proposed solution was based on the work and research of the Children's Defense Fund (CDF) and its founder, Marian Wright Edelman (Edelman, 2013). She advocated for a fully-funded system which requires that local, state, and federal governments to provide appropriate economic funding to support early childhood education on an equitable basis. The CPEO program in this Site of Research supported early childhood education by granting certificates to CPEO parents to enroll in early childhood family education classes upon graduation from the program (CPEO, 2010). Low-SES students and parents need support which may differ from elementary to middle to high school SES families.

Leveling the playing field also means providing equitable opportunities to parents across cultures to advance in the workplace which, in turn, entails low-SES parents acquiring skill sets that are marketable in today's economy. Closing the gap goes beyond parenting and ethnicity, a holistic approach which includes both the parent and child. Pathways to employment opportunities lead to higher SES and avoiding the chances of students entering the Cradle to Prison Pipeline. Employment opportunities should not be limited to parents working for an employer, but expand the opportunities for parents to learn how to become entrepreneurs. Opportunity Finance Network (OPN), a member of the Community Development Financial Institutions, provides loans for low-SES families and other marginalized groups to fund or capitalize small businesses (OPN, 2013). To

date, $30 billion has been loaned to the above-mentioned groups, and investors have been guaranteed repayment. Investing in low-SES family entrepreneurial ventures has been profitable. OPN does not focus on maximizing profits, but uses a portion of the profits to reinvest into the businesses. Borrowers have historically repaid their loans at a rate of 98%, which is similar to other start-up loans from traditional lending institutions. It can be a win-win opportunity; it elevates low-SES families and others from poverty to economic sustainability. CPEO could serve as the liaison to such equitable opportunities for the parents they serve.

Business Education

The traditional definition of literacy is the ability to read and write well enough to be functional in today's technological society. Equally important is financial literacy. It is imperative for secondary students to be financially literate in economics and personal finance, which are business education courses. The 2008 recession in the United States affected individuals of all SES levels due to significant surges in the unemployment rates among low, medium to highly skilled individuals which led to historic levels of foreclosures on personal homes. Businesses and households endured financial hardships. Many individuals faced the most pressing challenge of financial insecurity. According to Orman (2010), individuals needed personal savings equivalent to eight months of salaries or wages for emergency purposes such as unemployment. Employment opportunities were limited during the recession period. Many individuals who were seeking employment found the search to extend well beyond six months.

Many individuals who understand and apply the principles of financial literacy protect themselves against the chances of experiencing poverty and its associated

consequences. According to Hite (2013), economic courses provide students with knowledge of supply and demand, opportunity costs, and scarcity. Personal finance courses provide students with the intellectual capacity and discipline to manage credit and to make informed personal financial decisions. School districts need to allocate funding for courses teaching economics and personal finance. Students denied access to economics and personal finance courses may be deprived of a well functioning economic lifestyle.

Students who have access to business-related courses in their schools may also have the opportunity to participate in cooperative education programs, programs that allow students to work part time while in high school and learn work-readiness skills as well as establish links to the business community (McEwen, 2010). Such programs reinforce the goal of supporting career readiness as well as college readiness, goals now mandated by state and federal legislation (SSRDE, 2014b). Future generations benefit from a proactive attack on the fundamental problem of SES.

Broader Implications

It behooves CPEO to provide lessons and activities based on the parenting scales that have the strongest relationships with reading proficiency. The three parenting scales are: Role Activity Beliefs, Specific Child and Specific School Invitations. It would be beneficial for CPEO to empower parents to act upon their parenting belief system through the teaching process of goal setting and the acquisition of practical strategies. Once parents begin to activate their educational belief systems and build healthier and more positive communications with the schools, teachers, and their own children, the

results may lead to increased parent involvement and, in turn, increased reading proficiency.

The disparities in vocabulary and language development have been evident as early as three years old; in general, mothers who were living in low-SES communities tended to talk and interact less with their children than higher income parents, thus disparities developed and continued (Hart & Risley, 2003). It behooves the school districts to inform mothers in low-SES communities of the 30 million word gap in words heard by age three and provide academic support to all parents with children in the gap in order to reverse these ill effects. It may not change the circumstances, but enlighten parents of the vocabulary gap that exists. The information provides an awareness that such a gap persists and its early onset, and, through resiliency triggered by group empowerment, parents may be able to change their circumstance of limited vocabulary. According to Winfield (1991), resiliency of the parents can positively impact their children's development. CPEO may provide the opportunity for parents to empower themselves as a group.

According to Hale (1986), African-American students would benefit in the classroom with culturally enriched curriculum that honors the traditions of the African-American community. She espoused that African-American students are acculturated in their homes and communities. As a result, the lessons learned from these venues may create a dissonance in cognitive and behavioral learning with a difference culture in the school. The learning and culture at home and in the community may not be compatible with the educational system and classroom experiences currently in place. The educational process needs to work collaboratively with stakeholders to make the

necessary connections which build on the strengths of the home and culture. This implication provides a response to the importance of SES and the potential influence of the school.

According to Lazar, Edwards, and McMillon (2012), a nexus exists between language and culture. African-American language and Spanglish are legitimate forms of English, a variant from the standard use of English in the classroom. The Lazar et al. (2012) authors recommended validating the home language brought to school by empowering students through a variety of literacy teaching practices that build on the skills students possessed. Mathis (2013) posited the recommendations of a cross-cultural inclusive school environment for parents and students. He provided the following demographic information about the 5.3 million English language learners (ELL) students in the United States as of 2009 (a) Hispanics are 76.1% of ELL learners, and (b) 10% are Asian language speakers. Mathis (2013) advocated for school and policy changes to address the challenges of language for non-native English speakers.

Equity of opportunity is needed to guide low-SES families to a living standard in which the necessary resources are accessible to them. The school district through CPEO could become the central agency to disseminate information and opportunities. The CPEO program has developed connections between the parents and the school district in Title I schools. CPEO would expand its function to connect employment opportunities to parents seeking upward mobility. CPEO becomes a marketplace of opportunity creations, showing mainly Title I parents how to create opportunities for themselves to become upwardly mobile on the SES scale. Currently, CPEO provides a college financial aid workshop to instruct parents how to navigate the process for their children; more

importantly CPEO could provide workshops on how parents access financial aid for themselves.

Parents enrolling in postsecondary education while their own children are completing their K-12 education could provide an enriched family climate and/or lifestyle. Children would be witnessing firsthand through parental mentorship how to train or educate themselves beyond high school. The experiences could be both empowering and enlightening. CPEO maintains its advocacy for all students going to college, but CPEO can present parents with the idea that they also can go to college. Furthermore, college or other form of postsecondary education or training could promote acquisition of workplace skills that are marketable for the global economy.

CPEO serves as the liaison between the school district and parents; it is critical to sustain the relationships by offering programming on an ongoing basis. The one-time only model may prevent future collaborative efforts. Parent liaisons working in the schools need to be culturally competent and trained by CPEO. This way, CPEO can have an ongoing presence in Title I schools beyond the 7-week period in which the program has taken place. CPEO can provide a framework and formalized structure to parent involvement, particularly among Title I parents. CPEO creates a school-to-parent pipeline. Collectively, the school district can address some of the negative effects of SES on academic achievement. However, a holistic approach is needed that focuses on the students and parents as a unit.

Recommendations for Future Research

There is a need for future research to focus on parent involvement. Closing the gap goes beyond SES and ethnicity. Pathways to employment opportunities lead to

higher SES and reducing the odds of entering the Cradle to Prison Pipeline. A holistic approach is deemed necessary which includes the school, parent and child. There may be cultural differences in the definition of parent involvement. More research is needed to understand how parents perceive parent involvement from a cultural perspective and its impact on student achievement. It is important for teachers and administrators to understand the special circumstances of parents and students from different cultural backgrounds so that schools and parents can collaborate for increasing achievement for all students. It is also likely that parents of different SES and cultural backgrounds use different strategies of involvement. Therefore, it may be important to ask the question: what type of equity model would be beneficial for teachers and administrators to implement in addressing the academic achievement gap from a cultural perspective? Because each child is unique, understanding that the patterns of values and cultural endorsement support systems can affect academic success is crucial. It is hoped that future research will continue to address the many unanswered questions in this area (Niemeyer, Wong, & Westerhaus, 2011).

Conclusion

Achievement gaps and equity problems are evident in U. S. K-12 schools. The issues are complex; there is no single solution. As a community of scholars and researchers, we should parse out different aspects of the issues and conduct research with the hopes of one day using the research findings collectively to minimize or eliminate the gaps in achievement and in equity distributions. It takes a village, more than schools alone, to raise a child; in the village reside different types of resource capitals which can help build supports to reduce the achievement gap. Schools alone cannot erase SES

differences that affect achievement. Schools are a mere reflection of society. Parent involvement goes beyond the school settings; it entails schools and the influences of the SES of parents. In the long-term, solutions would encompass equitable opportunities for advancement toward financial and economic sustainability.

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Appendix A: Parent Involvement Project (PIP) Parent Questionnaire

Teri M. Primm Ricks
tprimm6466@aol.com

January 4, 2012

Dear CPEO Parent:

Congratulations on completing the CPEO program between 2008-2010.

Are you interested in contributing to research on the relationship between academic achievement and parental involvement? I am a PSD teacher who has returned to graduate school at the University of Minnesota's Department of Organizational Leadership, Policy, and Development. As part of my Ph.D. research work, I am studying the academic achievement gap, parental involvement, and the CPEO program. It is of keen interest to me to learn about the nature of parental involvement, and how it is related to academic achievement. I believe that the proposed study can assist urban school districts in the development of effective school programs and policies that lead to some possible solutions to closing the academic achievement gap by understanding the nature of parent involvement.

CPEO participants are selected because you have completed the seven-week parent educational training program in the areas of academic standards, standardized testing, discipline, home-school partnerships, and other areas of concern that address how parents can assist their children in achieving academic success. As you may know, the work you perform as a parent and a participant of CPEO is vital to your children's educational lives, the PSD, and society. Your participation is completely voluntary. All data including survey responses will be kept strictly confidential; CPEO participants will never be identified in any published results. If you have any questions, please feel free to contact me by email at tprimm6466@aol.com.

This is a wonderful opportunity for you to contribute to research on the relationship between academic achievement and parental involvement. If you are interested in participating, please read the informed consent document , and please sign and mail the informed consent document and survey questionnaire in the self-addressed stamped envelope. Thank you so much for your consideration to participate in this research study. Your voice and opinions are valuable and much appreciated.

Sincerely,

Teri M. Primm Ricks
Ph.D. Student
University of Minnesota
Department of Organizational Leadership, Policy, and Development

CONSENT FORM

Academic achievement gap related to parent involvement in an urban school district

You are invited to be in a research study on the academic achievement gap and parental involvement. You were selected as a possible participant because you graduated from the CPEO program offered by PSD. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Teri Primm Ricks, Ph. D. student, Department of Organizational Leadership, Policy and Development at the University of Minnesota.

Background Information

The purpose of this study is to investigate the nature of parental involvement and how it is related to student academic achievement between racial backgrounds of Whites, African-Americans, Asians and Hispanics. In this case, achievement is measured by the scores on district/state assessments in reading. By understanding the relationship between parent involvement and student achievement, school policies and programs such as CPEO may be expanded to serve more parents or move to its next level of programming.

Procedures:

If you give consent to be in this study, I would ask you to complete the enclosed survey of 58 questions on parent involvement; your responses will then be paired with your student's district identification number, demographic information, and district/state assessment score information. The survey will take 10-15 minutes to complete; it is adapted from a survey developed by "The Family-School Partnership Lab." This is a one-time occurrence; there are no follow-up interviews.

Risks and Benefits of being in the Study

Risk is kept to a minimal level, similar to risk that is encountered in everyday living. The benefit is your voice contributes to the ongoing discussions of student achievement in the district.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify an individual parent who completes the survey or their student(s). Research records will be stored securely, and only researchers will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with PSD or the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

I am the principal researcher; my name is Teri Primm Ricks. If you have questions/concerns, please feel free to contact me by email, tprimm6466@aol.com. My graduate school advisor is Dr.

Judith J. Lambrecht, and she may be contacted by email, jlambrec@umn.edu. May I ask for your consent to participate in the study? Again, if you do have questions or need clarification to make an informed decision, I do encourage you to please give me a telephone call or email me.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I give active consent to participate in the study, and grant parental approval to access all of my children's demographic and achievement data by PSD's identification number and parental contact information.

Signature of Participant (parent)_____

Date_____

Print First and Last Name (parent)_____

Parent Involvement Project (PIP)
Parent Questionnaire
Study 4

People have different feelings about school. Please circle the number on each line below that best describes your feelings about your school experiences WHEN YOU WERE A STUDENT.

1	My school:	disliked 1	2	3	4	5	liked 6
2	My teachers:	were mean 1	2	3	4	5	were nice 6
3	My teachers:	ignored me 1	2	3	4	5	cared about me 6
4	My school experience:	bad 1	2	3	4	5	good 6
5	I felt like:	an outsider 1	2	3	4	5	I belonged 6
6	My overall experience:	failure 1	2	3	4	5	success 6

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about the current school year as you consider each statement.

		Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
7	I know how to help my child do well in school.	1	2	3	4	5	6
8	I don't know if I'm getting through to my child.	1	2	3	4	5	6
9	I don't know how to help my child make good grades in school.	1	2	3	4	5	6
10	I feel successful about my efforts to help my child learn.	1	2	3	4	5	6
11	I don't know how to help my child learn.	1	2	3	4	5	6

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about the current school year as you consider each statement.

		Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
12	Teachers at this school are interested and cooperative when they discuss my child.	1	2	3	4	5	6
13	I feel welcome at this school.	1	2	3	4	5	6

Please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR?

		never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
14	My child's teacher asked me or expected me to help my child with homework.	1	2	3	4	5	6
15	My child's teacher asked me to talk with my child about the school day.	1	2	3	4	5	6
16	My child's teacher asked me to attend a special event at school.	1	2	3	4	5	6
17	My child's teacher asked me to help out at the school.	1	2	3	4	5	6
18	My child's teacher contacted me (for example, sent a note, phoned, e-mailed).	1	2	3	4	5	6

Parents have many different beliefs about their level of responsibility in their children's education. Please respond to the following statements by indicating the degree to which you believe you are responsible for the following.

	I believe it's my responsibility to…	Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
19	…volunteer at the school.	1	2	3	4	5	6
20	…communicate with my child's teacher regularly.	1	2	3	4	5	6
21	…help my child with homework.	1	2	3	4	5	6
22	…make sure the school has what it needs.	1	2	3	4	5	6
23	...support decisions made by the teacher.	1	2	3	4	5	6
24	...stay on top of things at school.	1	2	3	4	5	6
25	…explain tough assignments to my child.	1	2	3	4	5	6
26	…talk with other parents from my child's school.	1	2	3	4	5	6
27	…make the school better.	1	2	3	4	5	6
28	…talk with my child about the school day.	1	2	3	4	5	6

Dear Parent, Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about THE CURRENT SCHOOL YEAR as you consider each statement.

		Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
29	I know about special events at school.	1	2	3	4	5	6
30	I have enough time and energy to help out at my child's school.	1	2	3	4	5	6
31	I know enough about the subjects of my child's homework to help him or her.	1	2	3	4	5	6
32	I have enough time and energy to communicate effectively with my child's teacher.	1	2	3	4	5	6
33	I have enough time and energy to attend special events at school.	1	2	3	4	5	6
34	I know how to supervise my child's homework.	1	2	3	4	5	6
35	I know about volunteering opporutunities at my child's school.	1	2	3	4	5	6
36	I know how to explain things to my child about his or her homework.	1	2	3	4	5	6
37	I have enough time and energy to help my child with homework.	1	2	3	4	5	6
38	I have the skills to help out at my child's school.	1	2	3	4	5	6
39	I have enough time and energy to supervise my child's homework.	1	2	3	4	5	6

Parents and families do many different things when they are involved in their children's education. We would like to know how often you have done the following SINCE THE BEGINNING OF THE SCHOOL YEAR.

	Someone in this family...	never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
40	...talks with this child about the school day.	1	2	3	4	5	6
41	...supervises this child's homework.	1	2	3	4	5	6
42	...helps out at this child's school.	1	2	3	4	5	6
43	...attends special events at school.	1	2	3	4	5	6
44	...helps this child study for tests.	1	2	3	4	5	6
45	...volunteers to go on class field trips.	1	2	3	4	5	6
46	...attends PTA meetings.	1	2	3	4	5	6
47	...practices spelling, math or other skills with this child.	1	2	3	4	5	6
48	...reads with this child.	1	2	3	4	5	6
49	…goes to the school's open-house.	1	2	3	4	5	6

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about *the current school year* as you consider each statement.

		Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
50	Parent activities are scheduled at this school so that I can attend.	1	2	3	4	5	6
51	This school lets me know about meetings and special school events.	1	2	3	4	5	6
52	This school's staff contacts me promptly about any problems involving my child.	1	2	3	4	5	6
53	The teachers at this school keep me informed about my child's progress in school.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

	We encourage this child…	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
54	...when he or she doesn't feel like doing schoolwork.	1	2	3	4	5	6
55	...when he or she has trouble *organizing* schoolwork.	1	2	3	4	5	6
56	…to *try new ways* to do schoolwork when he or she is having a hard time.	1	2	3	4	5	6
57	…to be aware of how he or she is doing with schoolwork.	1	2	3	4	5	6
58	…to develop an interest in schoolwork.	1	2	3	4	5	6
59	…to look for more information about school subjects.	1	2	3	4	5	6
60	…to stick with a problem until he or she solves it.	1	2	3	4	5	6
61	…to believe that he or she can do well.	1	2	3	4	5	6
62	…to believe that he or she can learn new things.	1	2	3	4	5	6
63	…to ask other people for help when a problem is hard.	1	2	3	4	5	6
64	...to follow the teacher's directions.	1	2	3	4	5	6
65	…to explain what he or she thinks to the teacher.	1	2	3	4	5	6

66	...when he or she has trouble *doing* schoolwork.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

	We show this child that we…	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
67	…like to learn new things.	1	2	3	4	5	6
68	...know how to solve problems.	1	2	3	4	5	6
69	…enjoy figuring things out.	1	2	3	4	5	6
70	…do not give up when things get hard.	1	2	3	4	5	6
71	…ask others for help when a problem is hard to solve.	1	2	3	4	5	6
72	…can explain what we think to others.	1	2	3	4	5	6
73	…can learn new things.	1	2	3	4	5	6
74	…want to learn as much as possible.	1	2	3	4	5	6
75	…like to solve problems.	1	2	3	4	5	6
76	…try different ways to solve a problem when things get hard.	1	2	3	4	5	6
	We show this child we like it when he or she…	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
77	…wants to learn new things.	1	2	3	4	5	6
78	…tries to learn as much as possible.	1	2	3	4	5	6
79	…has a good attitude about doing his or her homework.	1	2	3	4	5	6
80	…keeps working on homework even when he or she doesn't feel like it.	1	2	3	4	5	6
81	…asks the teacher for help.	1	2	3	4	5	6
82	…explains what he or she thinks to the teacher.	1	2	3	4	5	6
83	…explains to us what he or she thinks about school.	1	2	3	4	5	6
84	…works hard on homework.	1	2	3	4	5	6
85	…understands how to solve problems.	1	2	3	4	5	6
86	…sticks with a problem until he or she solves it.	1	2	3	4	5	6
87	...organizes his or her schoolwork.	1	2	3	4	5	6
88	…checks his or her work.	1	2	3	4	5	6
89	…finds new ways to do schoolwork when he or she gets stuck.	1	2	3	4	5	6

Dear Parent, please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR?

		never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
90	My child asked me to help explain something about his or her homework.	1	2	3	4	5	6
91	My child asked me to supervise his or her homework.	1	2	3	4	5	6
92	My child asked me to attend a special event at school.	1	2	3	4	5	6
93	My child asked me to help out at the school	1	2	3	4	5	6
94	My child asked me to talk with his or her teacher.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

	We teach this child…	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
95	...to go at his or her own pace while doing schoolwork.	1	2	3	4	5	6
96	…to take a break from his or her work when he or she gets frustrated.	1	2	3	4	5	6
97	...how to check homework as he or she goes along.	1	2	3	4	5	6
98	...how to get along with others in his or her class.	1	2	3	4	5	6
99	…to follow the teacher's directions.	1	2	3	4	5	6
100	…ways to make his or her homework fun.	1	2	3	4	5	6
101	…how to find out more about things that interest him or her.	1	2	3	4	5	6
102	…to try the problems that help him or her learn the most.	1	2	3	4	5	6
103	…to have a good attitude about his or her homework.	1	2	3	4	5	6
104	…to keep trying when he or she gets stuck.	1	2	3	4	5	6
105	…to stick with his or her homework until he or she finishes it.	1	2	3	4	5	6
106	…to work hard.	1	2	3	4	5	6
107	…to talk with the teacher when he or she has questions.	1	2	3	4	5	6
108	…to ask questions when he or she doesn't understand something.	1	2	3	4	5	6
109	...to make sure he or she understands one part before going on to the next.	1	2	3	4	5	6

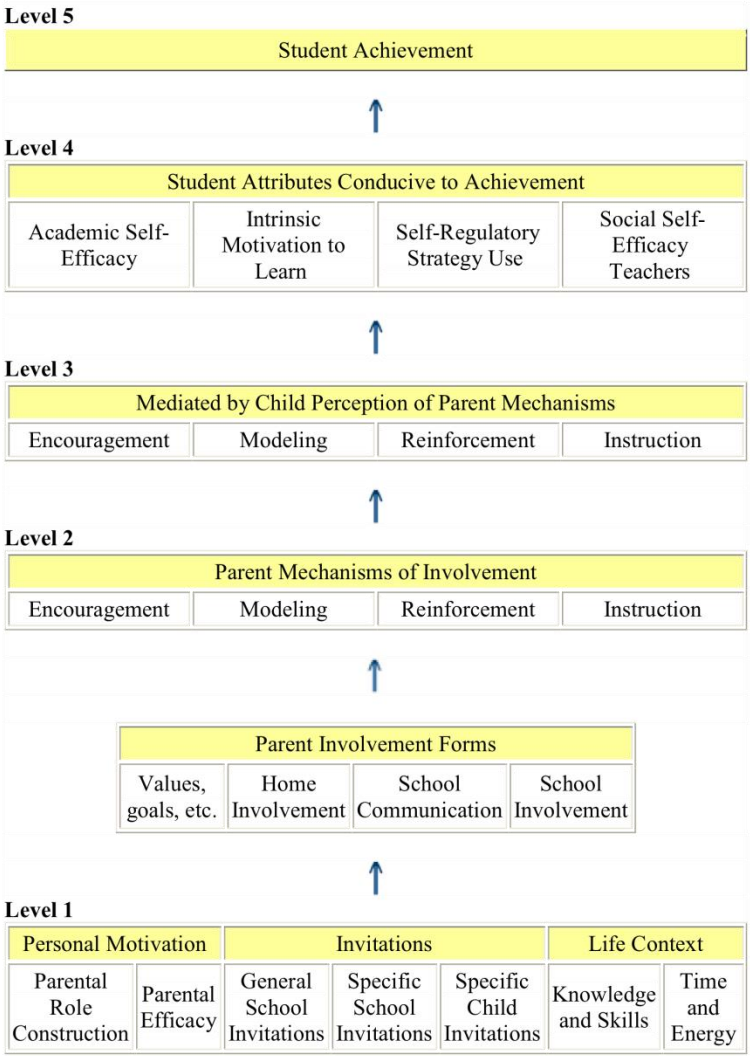
Appendix B: PIP Questionnaire Items (Hoover-Dempsey & Sandler, 2005)

Parent Scale	**Item Numbers**
Valence Scale	1-6
Parent Efficacy	7-11
General School Invites	12-13, 50-53
Specific Teacher Demands	14-18
Role Beliefs	19-28
Knowledge and Skills	29, 31, 34-36, 38
Time and Energy	30, 32-33, 37, 39
Involvement Activities	40-49
Specific Child Demands	54-58

Appendix C: The Hoover –Dempsey & Sandler Model of Parental Involvement (Hoover-Dempsey & Sandler, 2005)

The Model

The Hoover-Dempsey & Sandler Model of Parental Involvement



Adapted from Hoover-Dempsey & Sandler, 1995; 2005.

Appendix D: Study 4 Scales and Reliabilities (Hoover-Dempsey & Sandler, 2005)

Scale	Alpha
Level 1 (revised model)	
Personal motivators of involvement	
Parental role construction	
Role activity beliefs (10 items)	.80
Valence toward school (6 items)	.85
Sense of efficacy for helping child succeed in school (7 items)	.78
Parental perceptions of invitations to involvement	
General invitations from the school (6 items)	.88
Specific invitations from the child (6 items)	.70
Specific invitations from the teacher (6 items)	.81
Parents' perceived life context	
Perceptions of knowledge and skills (9 items)	.83
Perceptions of time and energy (6 items)	.84
Level 2 (revised model)	
Parent's report of involvement forms	
Home-based involvement activities (5 items)	.85
School-based involvement activities (5 items)	.82
Total involvement activities (10 items)	.76
Parent's report of involvement mechanisms	
Encouragement (13 items)	.92
Modeling (14 items)	.94

Reinforcement (13 items)	.96
Instruction (15 items)	.92
Level 3 (revised model: Student's perceptions of parent's involvement	
Student reports of parental encouragement (12 items)	.87
Student reports of parental modeling (10 items)	.75
Student reports of parental reinforcement (12 items)	.87
Student reports of parental instruction (15 items)	.86
Level 4 (revised model): Student's report of proximal outcomes of involvement	
Student report of academic self-efficacy (3 items)	.71
Student report of intrinsic motivation to learn (3 items)	.66
Student report of self-regulatory strategy use (4 items)	.61
Student report of social self-efficacy for relating to teachers (4 items)	.72
Level 5 (revised model):Student distal outcome: summary measure of achievement	
State's Annual Comprehensive Achievement Assessment Package (TCAP)	

Appendix E: Histograms and Scatterplots of Residuals

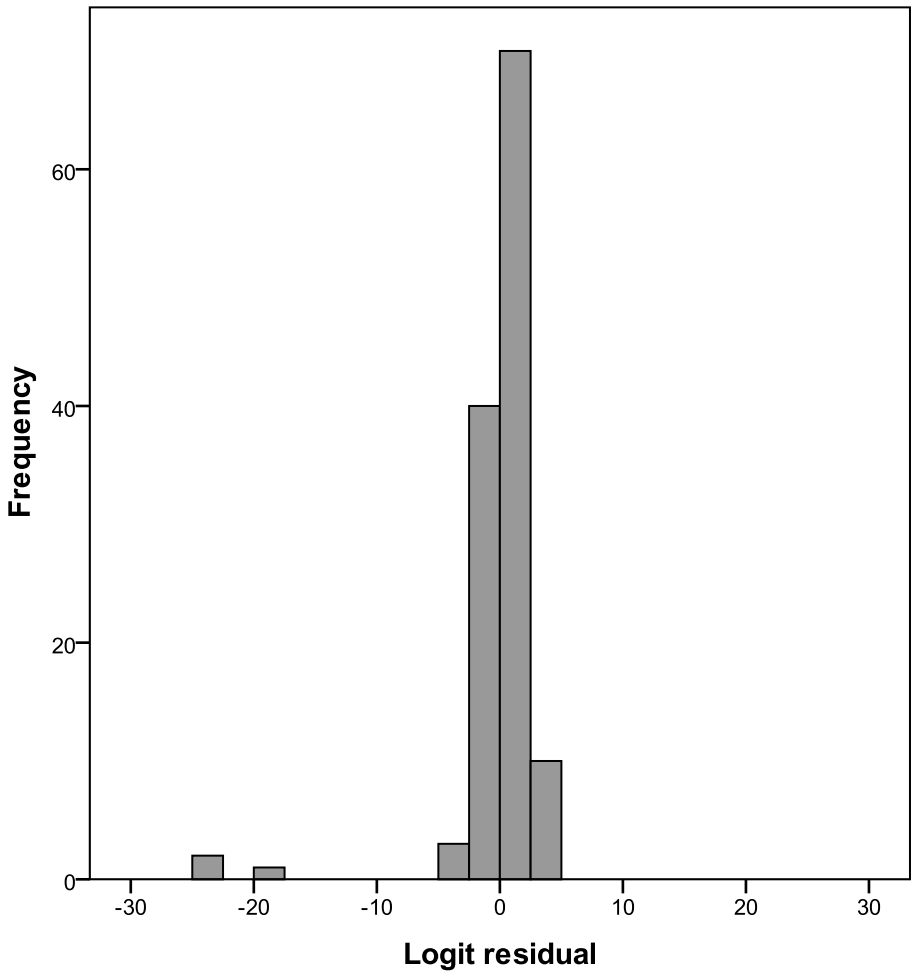


Figure 3.
Histogram of residuals from modeling containing Valence scale

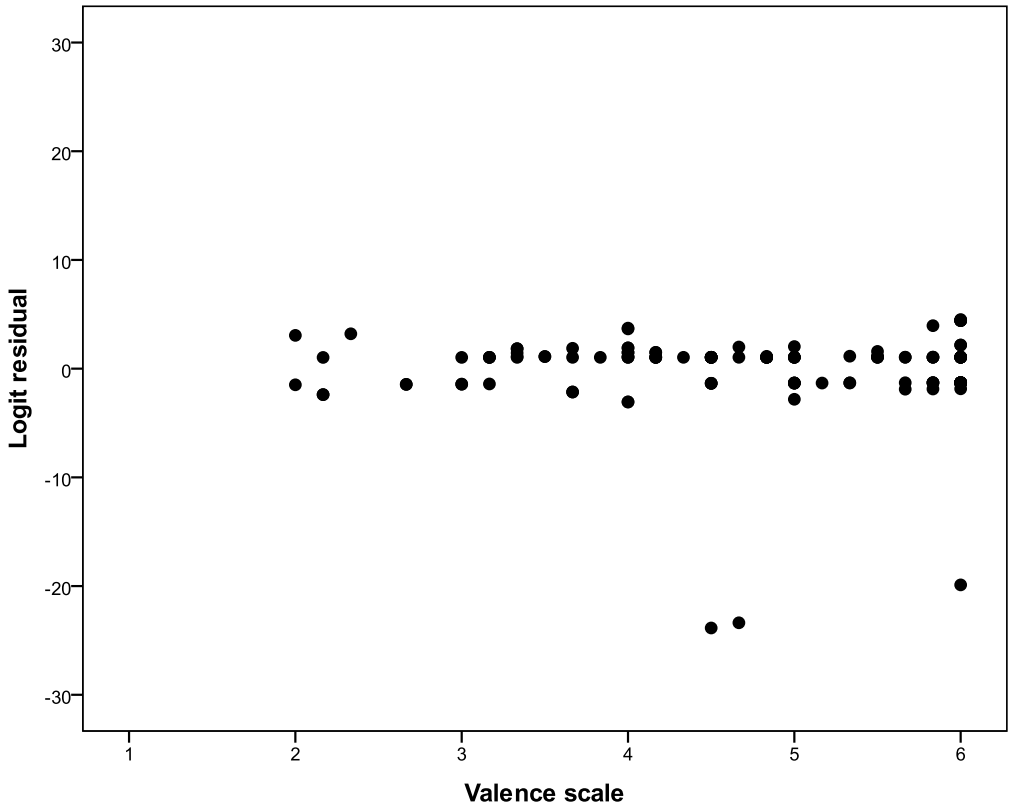


Figure 4.
Scatterplot between valence model residuals and raw data

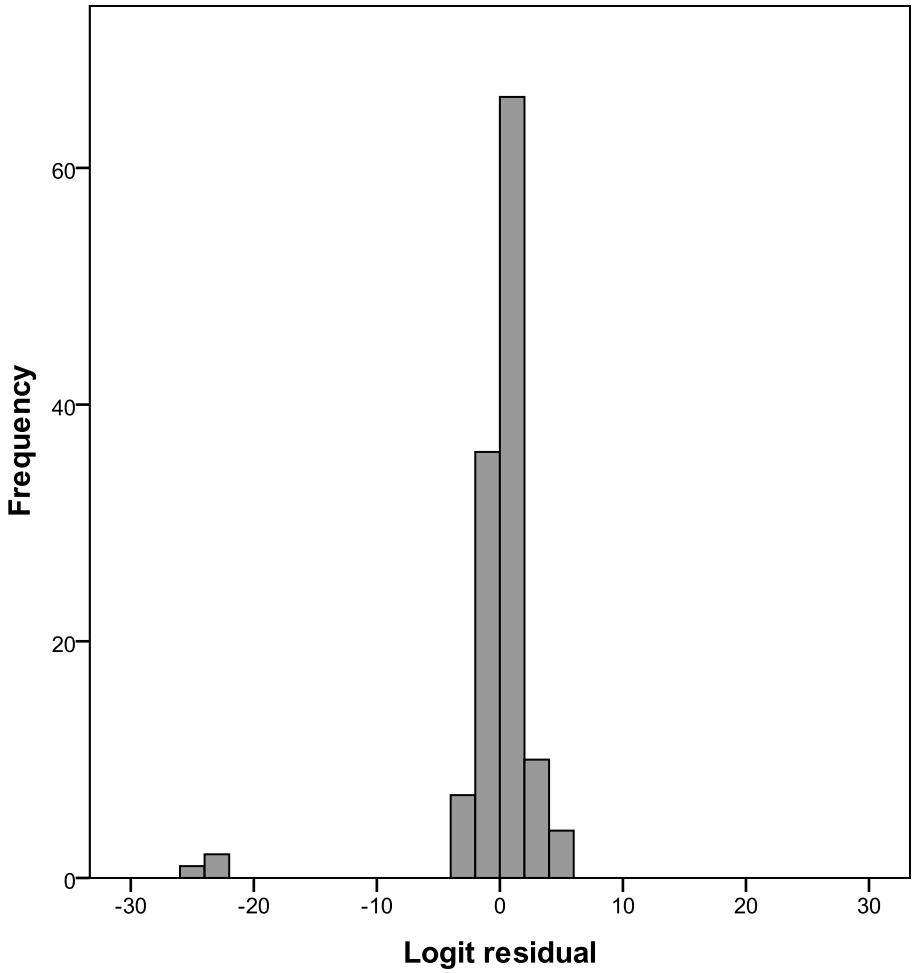


Figure 5.
Histogram of residuals from modeling containing Parental Efficacy scale

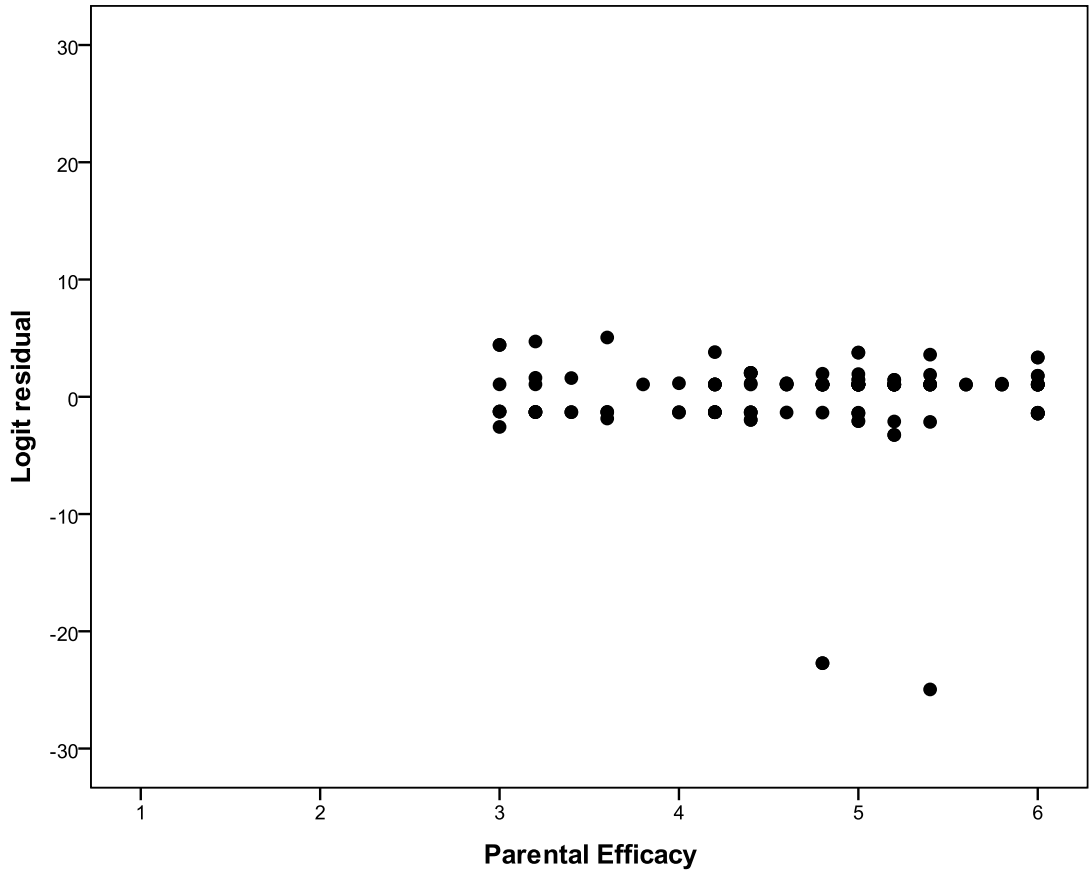


Figure 6.
Scatterplot between parental efficacy model residuals and raw data

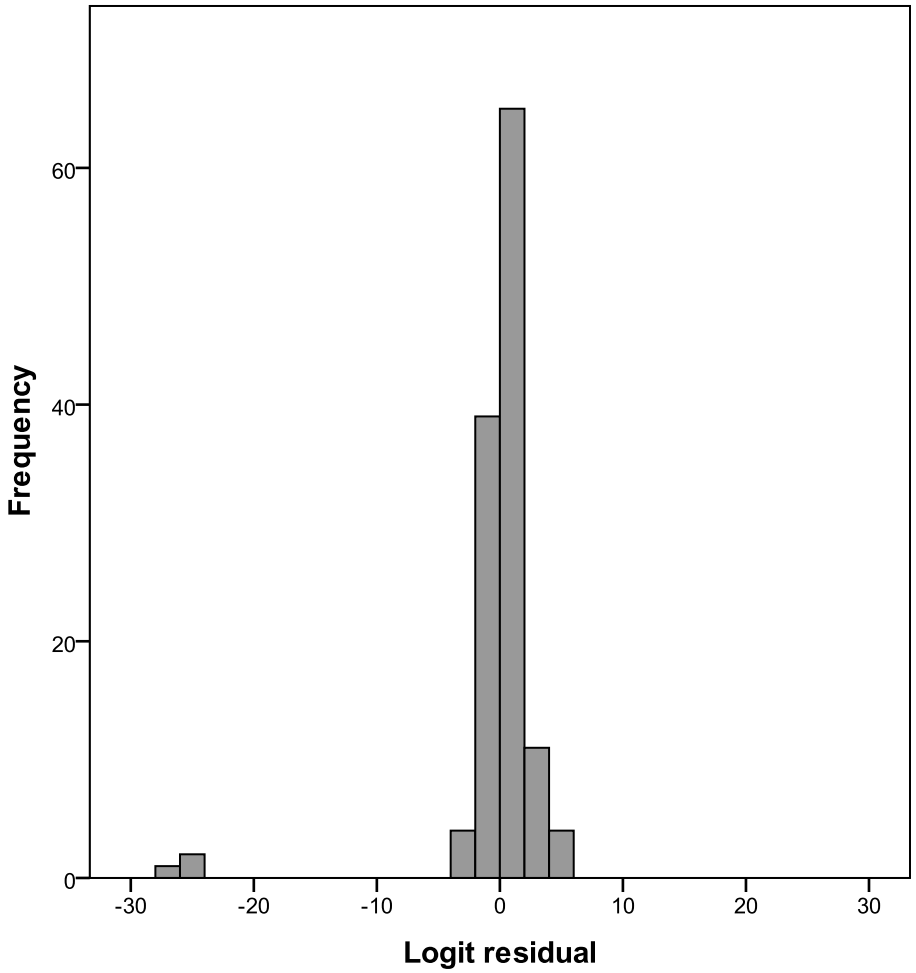


Figure 7.
Histogram of residuals from modeling containing Role Activity Beliefs scale

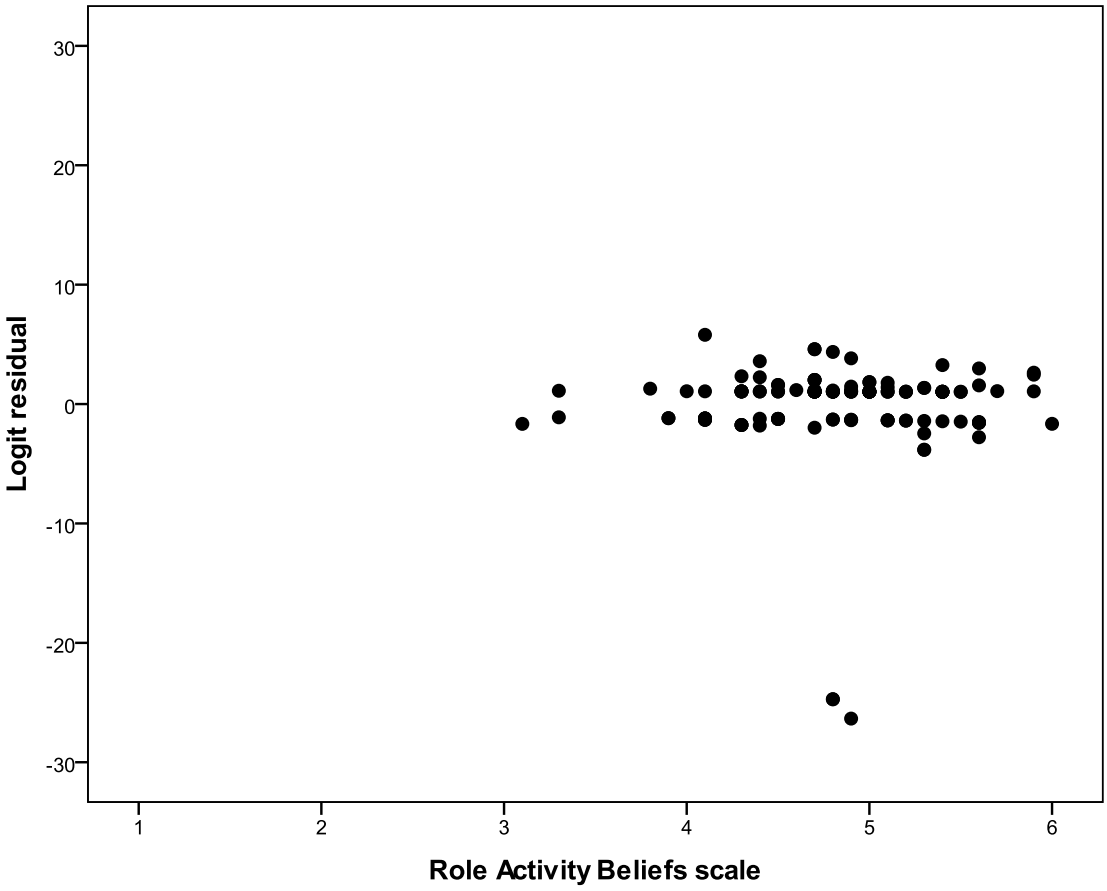


Figure 8.
Scatterplot between role activity beliefs model residuals and raw data

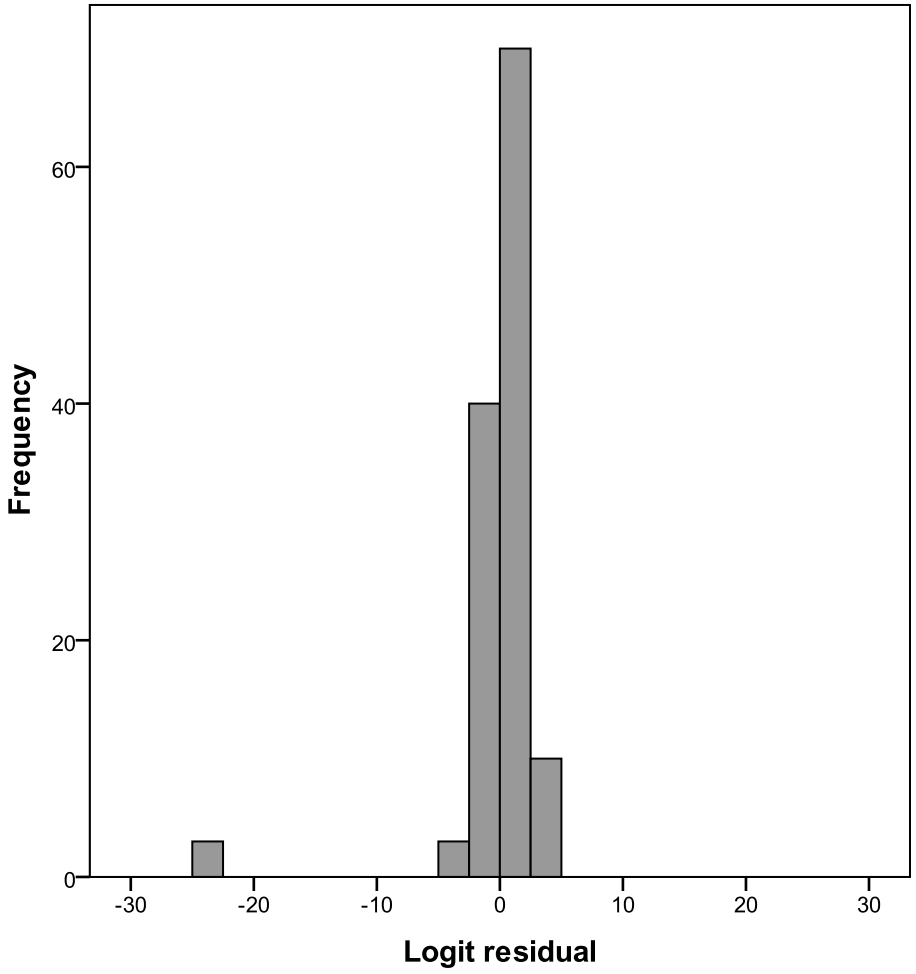


Figure 9.
Histogram of residuals from modeling containing General School Invitations scale

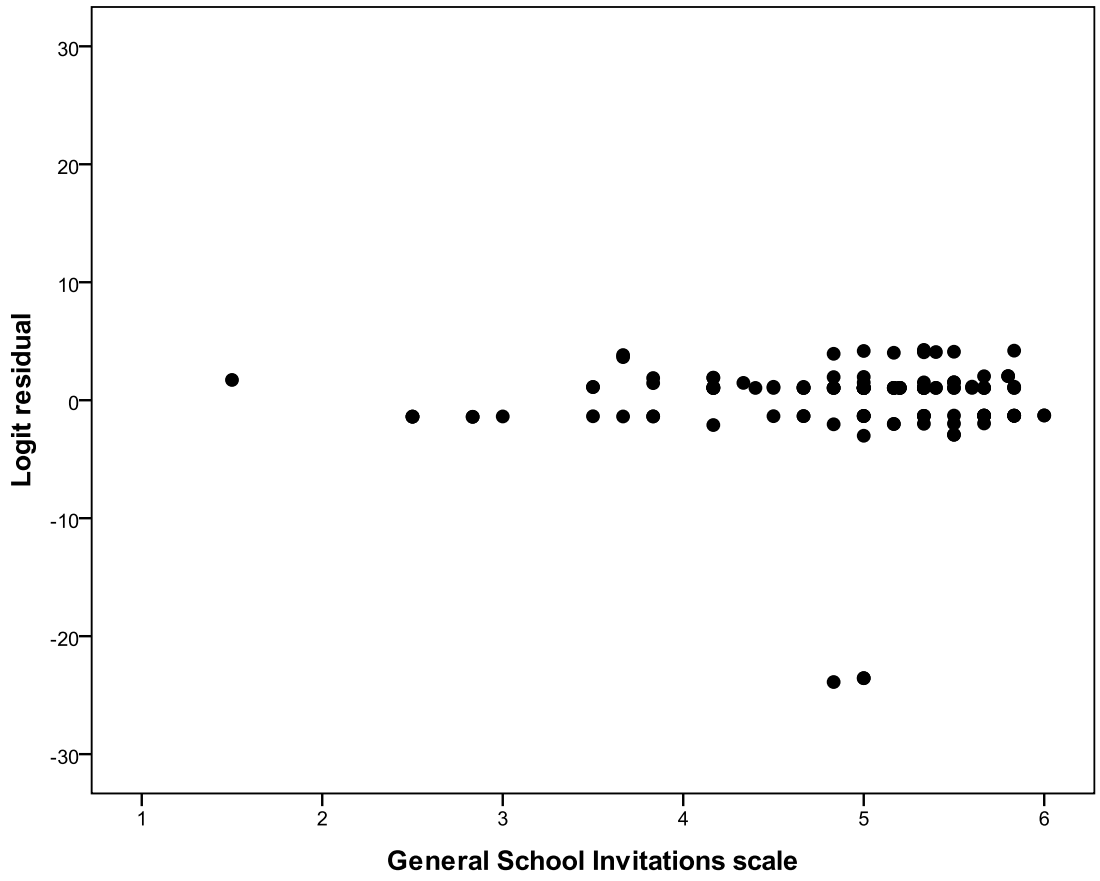


Figure 10.
Scatterplot between valence model residuals and raw data

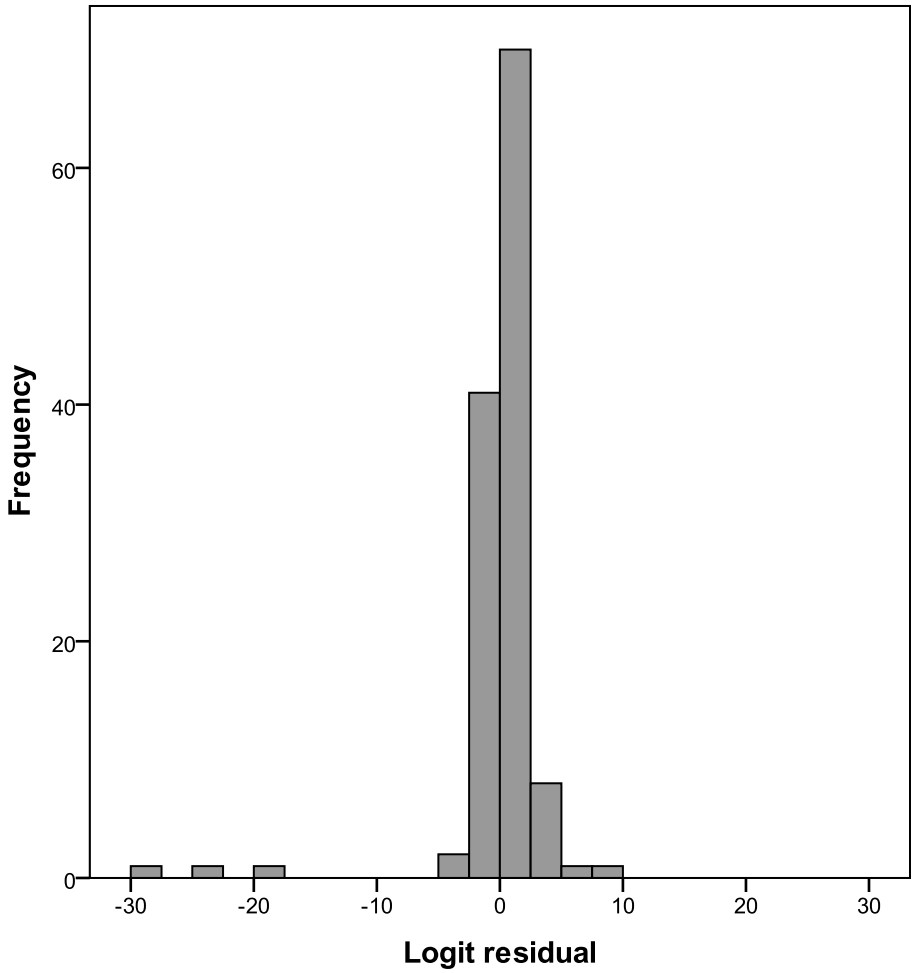


Figure 11.
Histogram of residuals from modeling containing Specific School Invitations scale

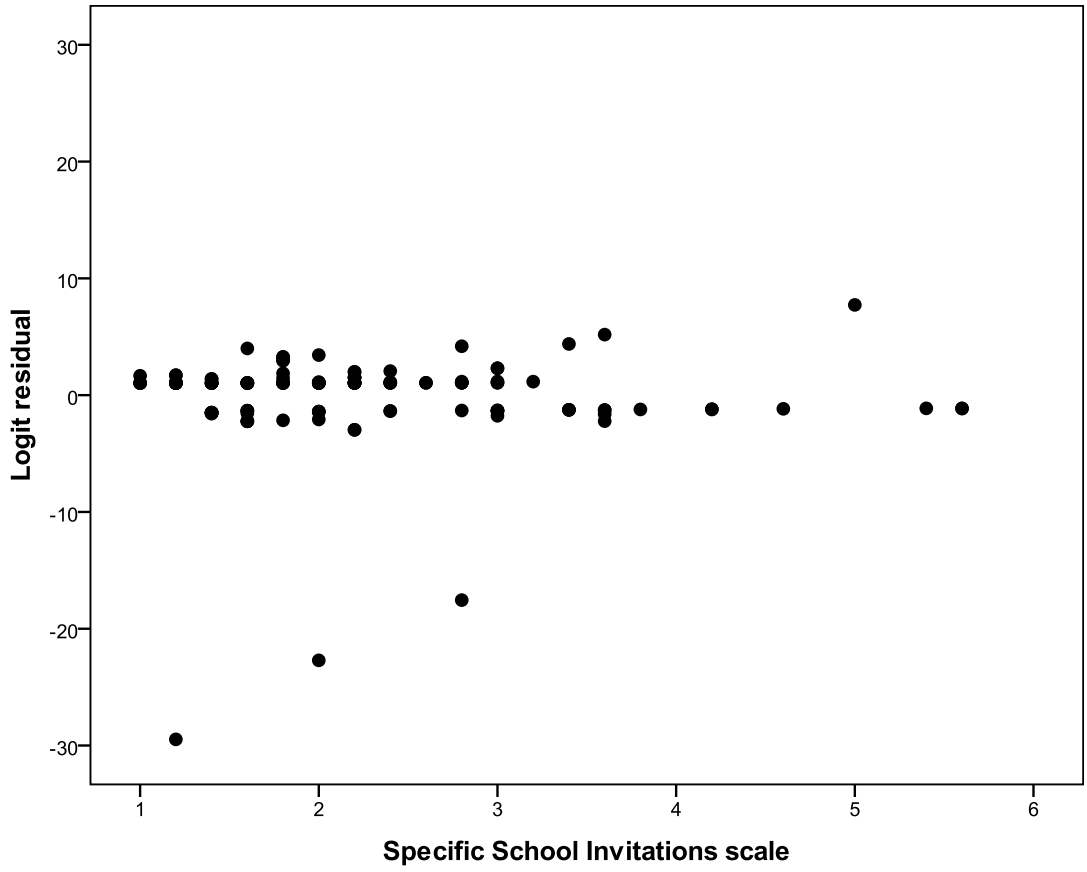


Figure 12.
Scatterplot between specific school invitations model residuals and raw data

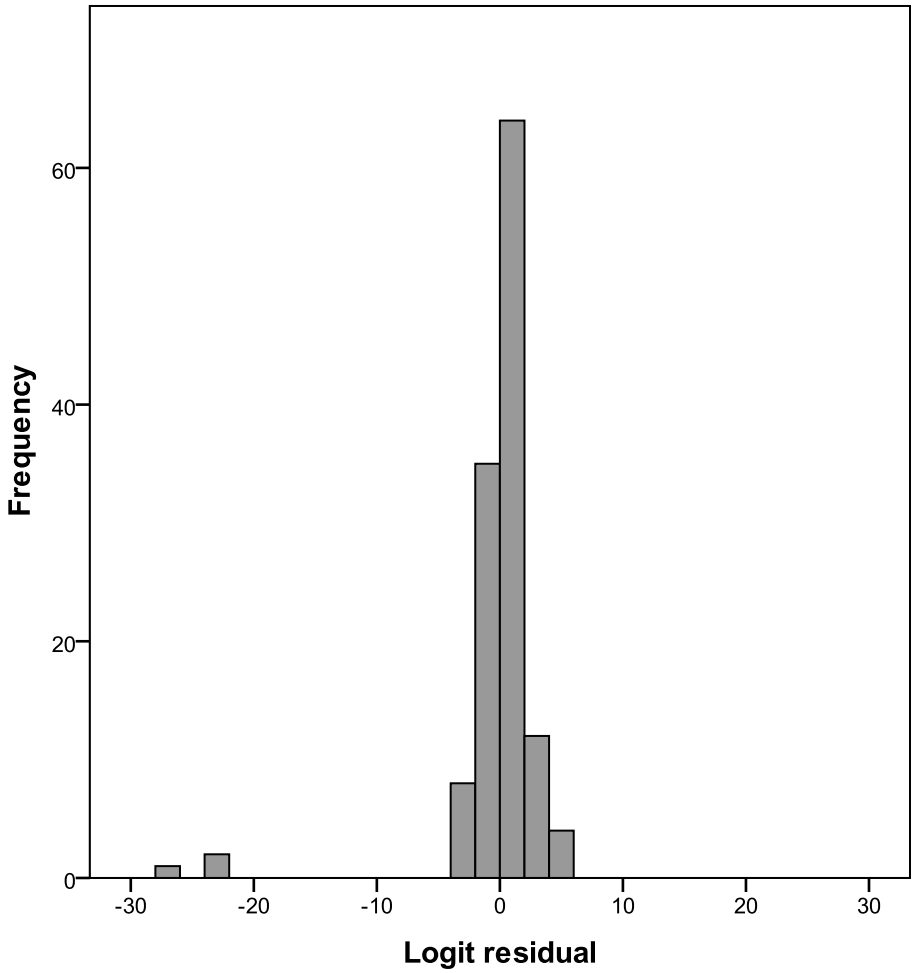


Figure 13.
Histogram of residuals from modeling containing Specific Child Invitations scale

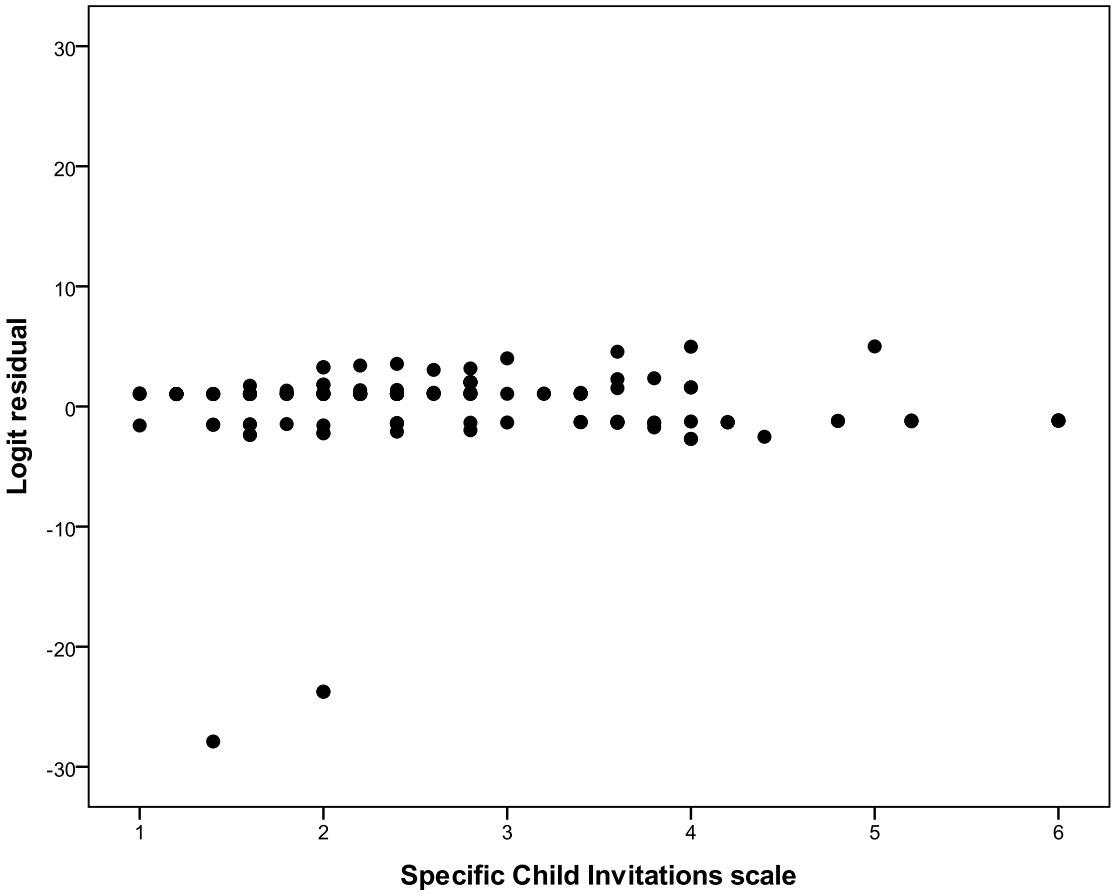


Figure 14.
Scatterplot between Specific Child Invitations model residuals and raw data

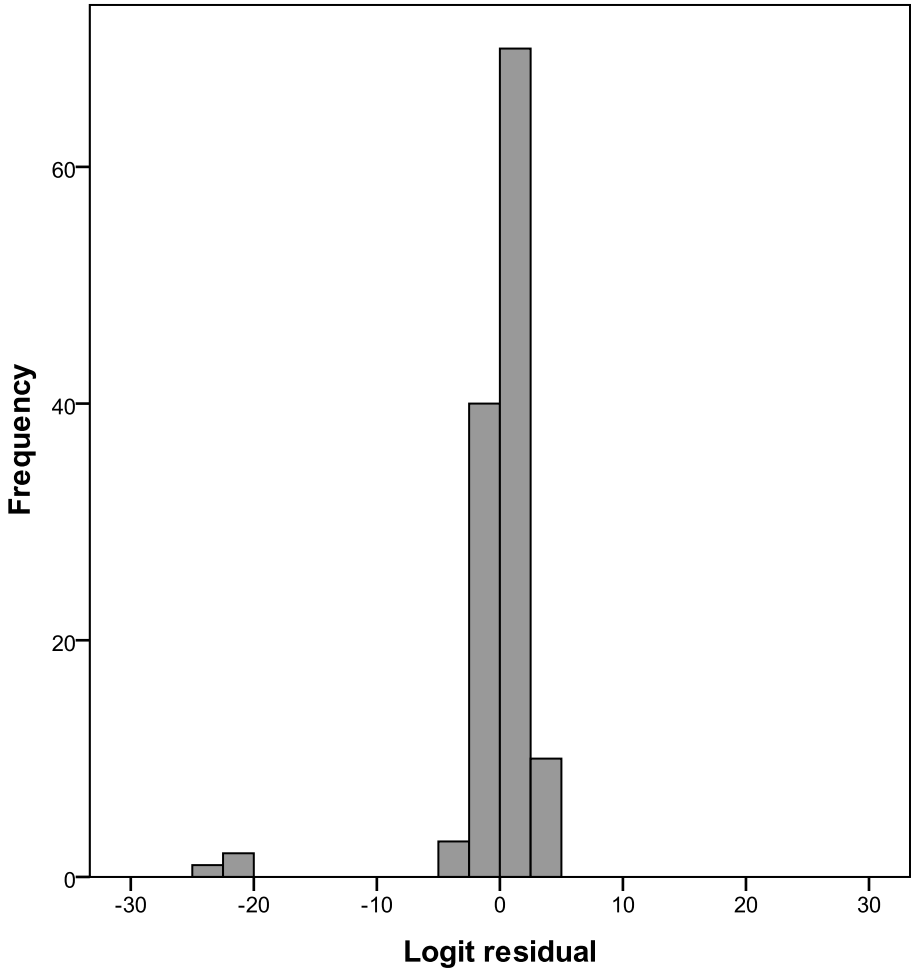


Figure 15.
Histogram of residuals from modeling containing Knowledge and Skills scale

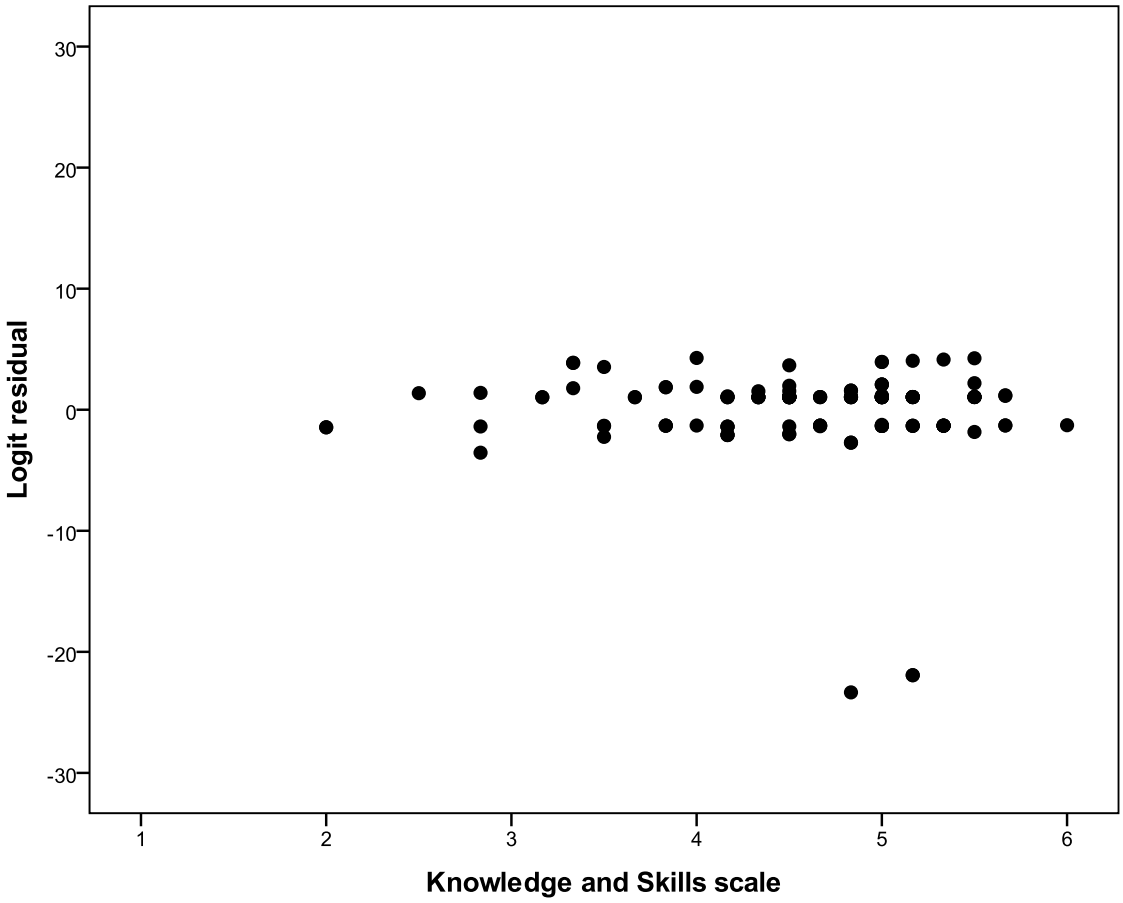


Figure 16.
Scatterplot between knowledge and skills model residuals and raw data

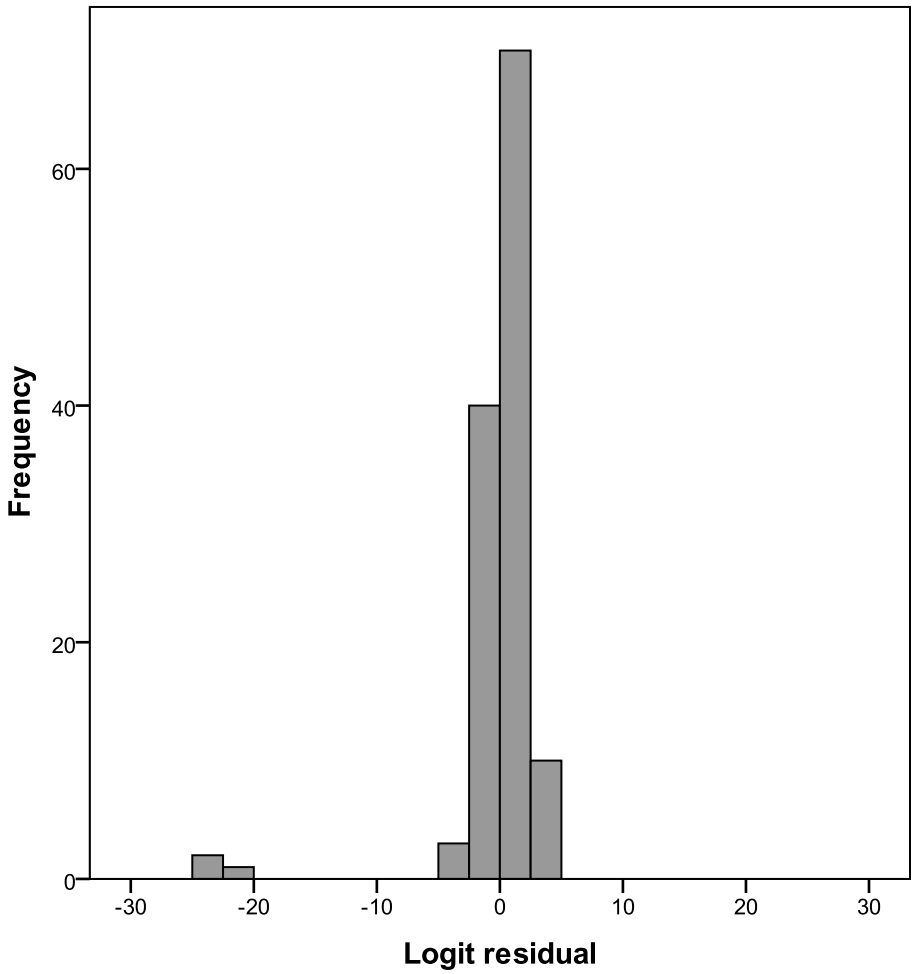


Figure 17.
Histogram of residuals from modeling containing Time and Energy scale

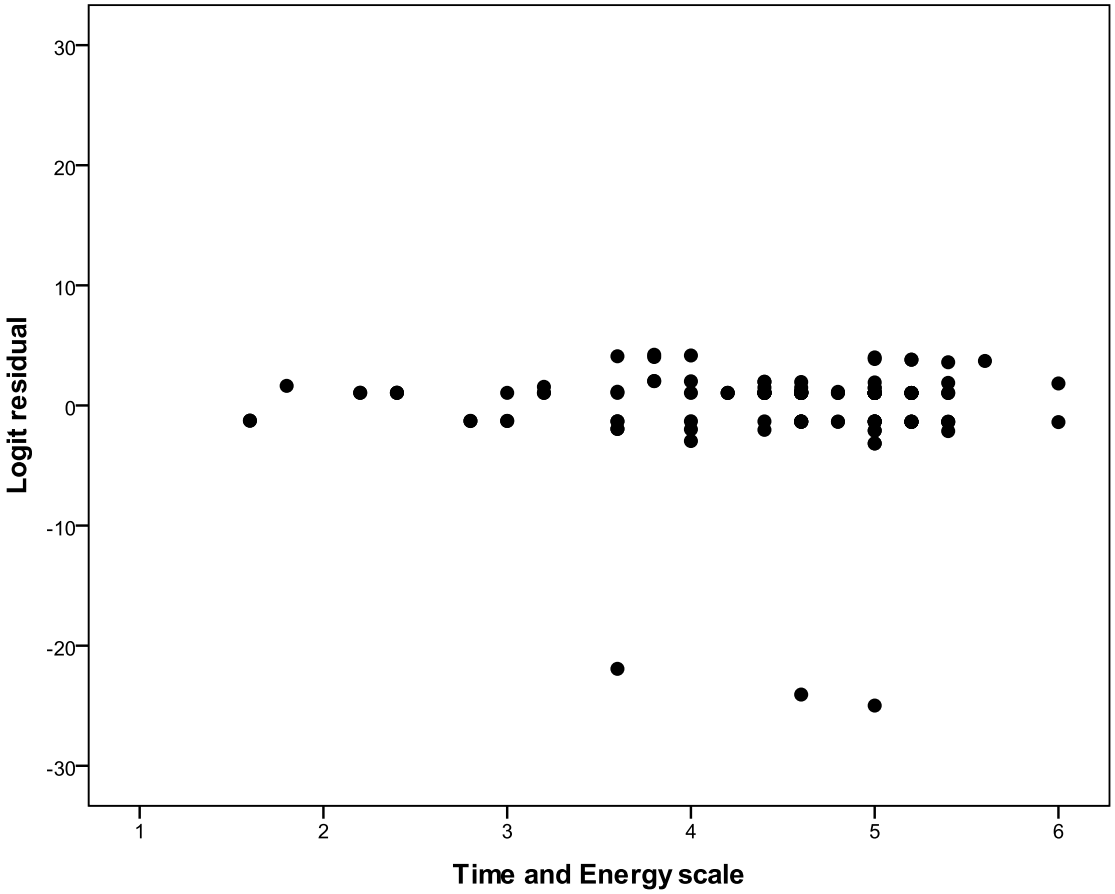


Figure 18.
Scatterplot between time and energy model residuals and raw data

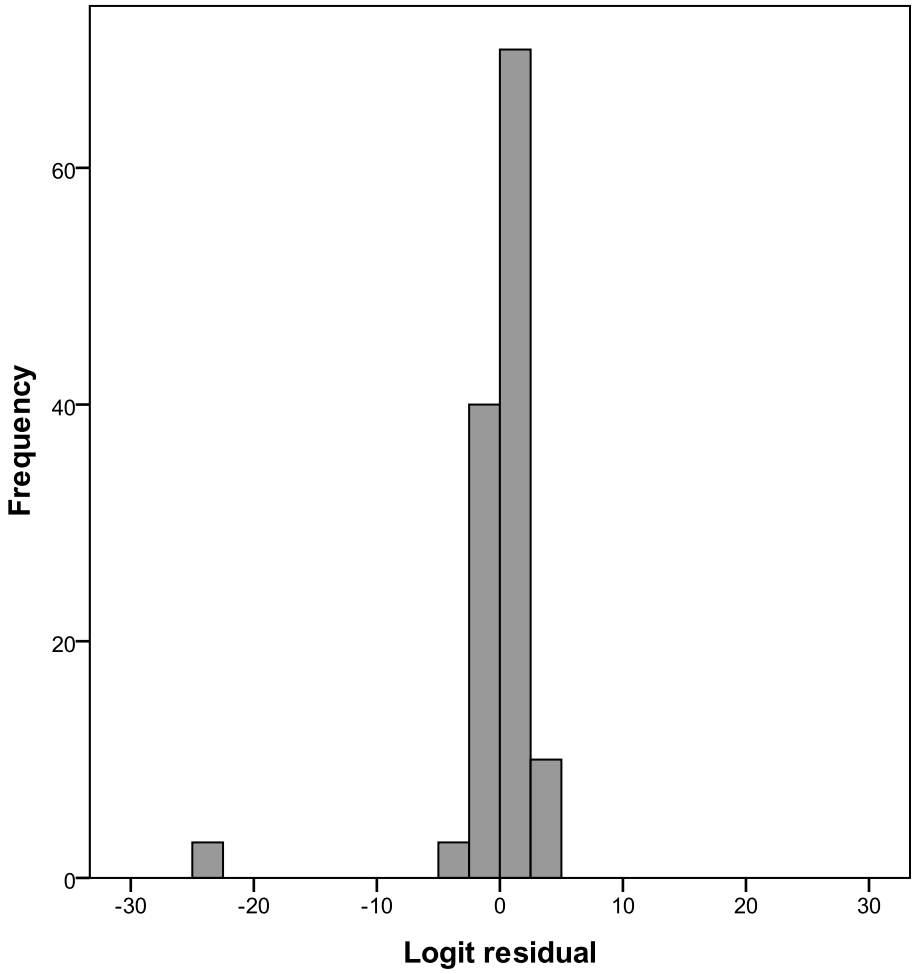


Figure 19.
Histogram of residuals from modeling containing Home Involvement scale

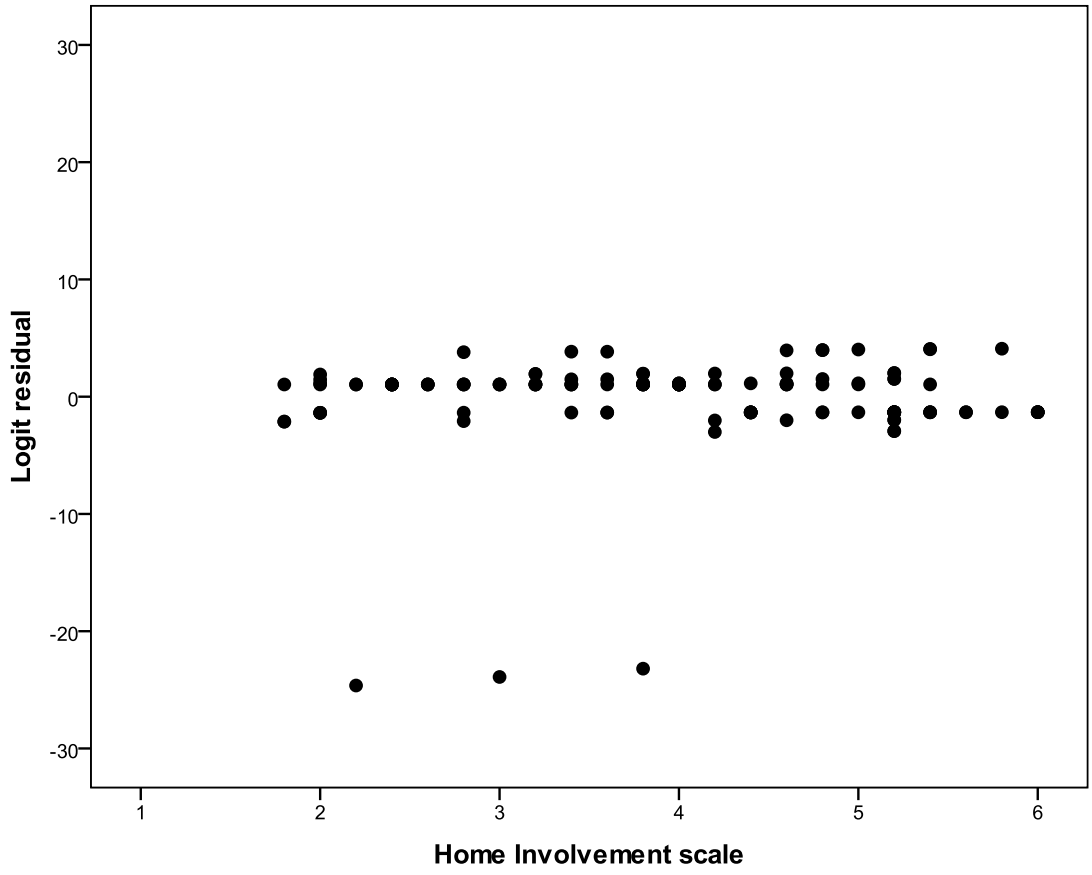


Figure 20.
Scatterplot between Home Involvement model residuals and raw data

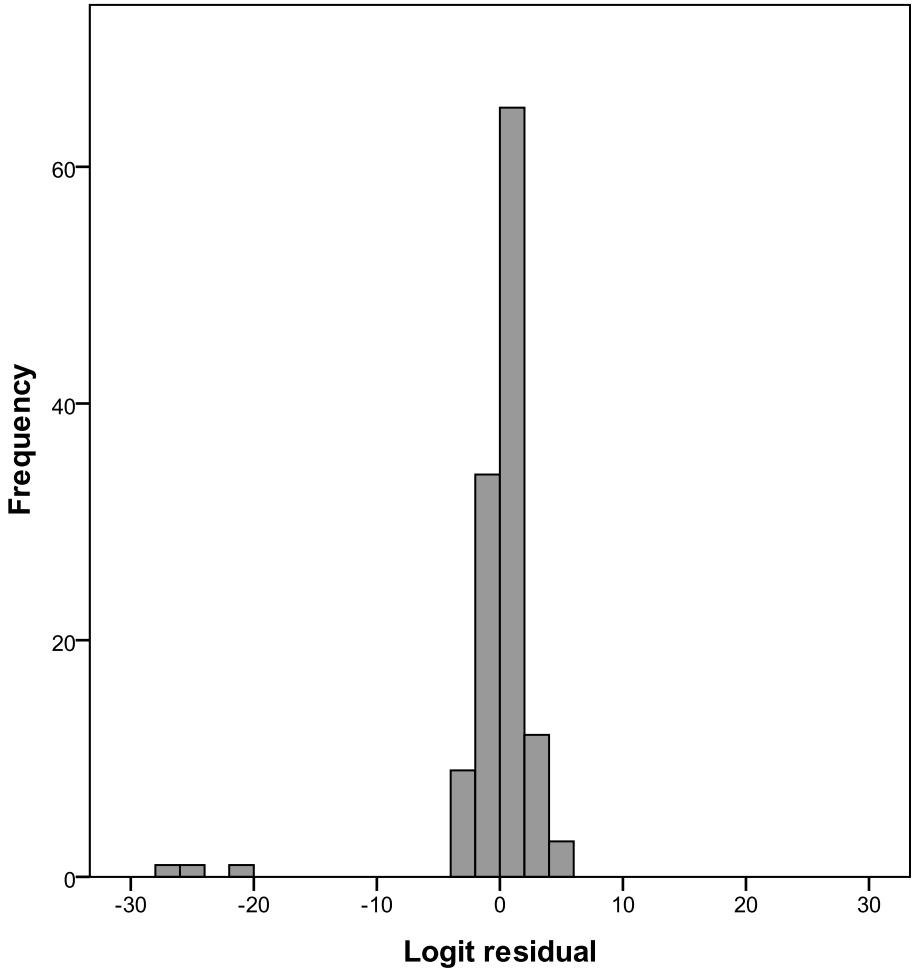


Figure 21.
Histogram of residuals from modeling containing School Involvement scale

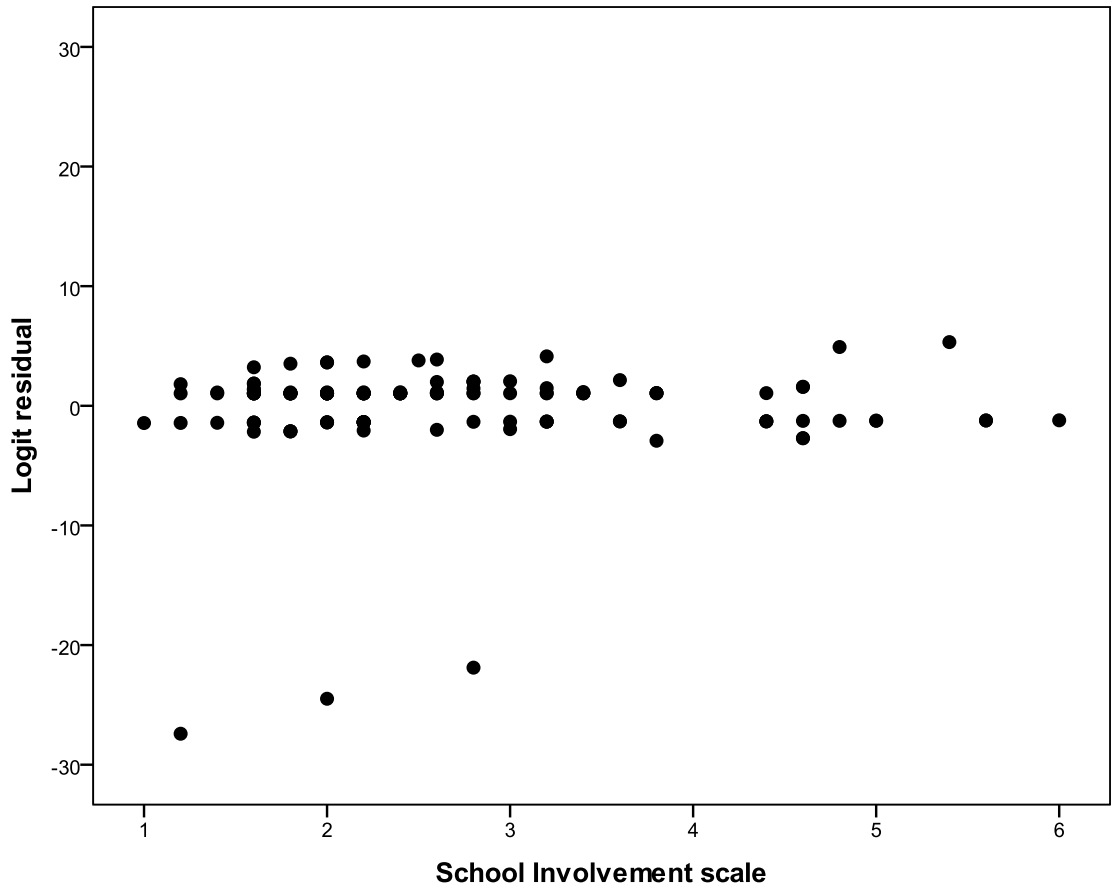


Figure 22.
Scatterplot between school involvement model residuals and raw data